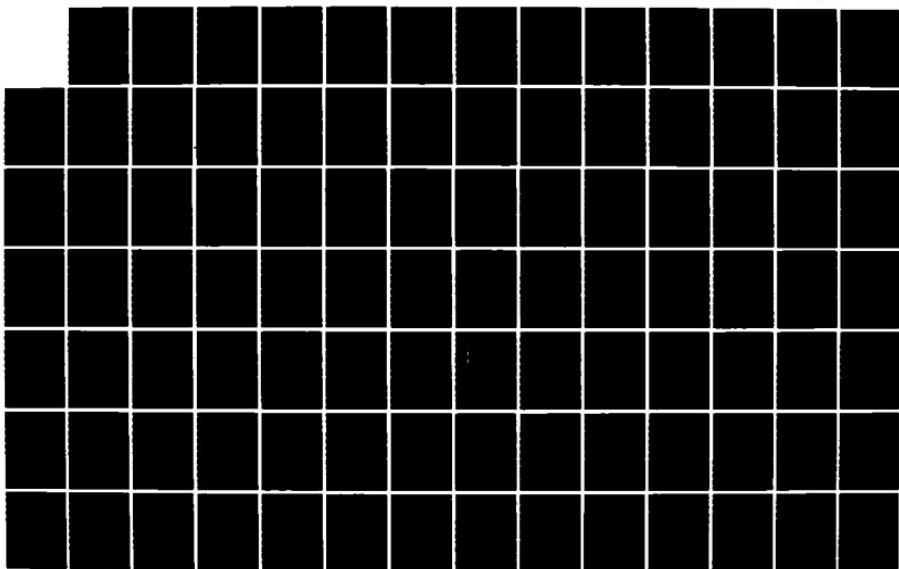


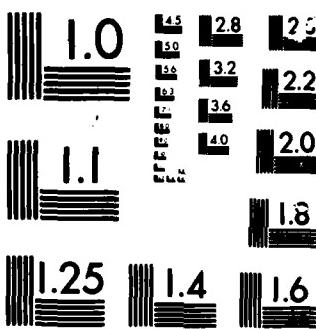
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# AIR COMMAND AND STAFF COLLEGE



## STUDENT REPORT

JOB ATTITUDES OF USAF CONTRACTING  
AND MANUFACTURING PERSONNEL

MAJOR JOHN M. PACE

86-1920

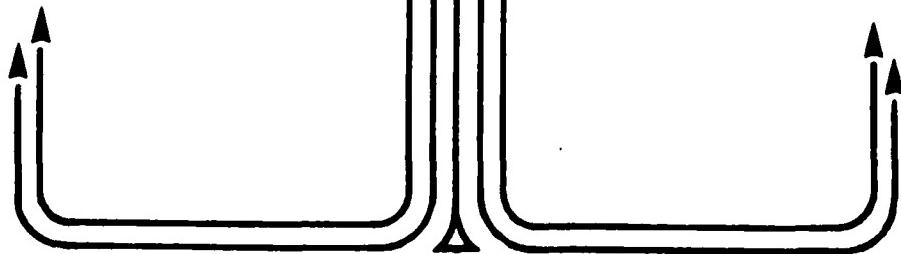
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**REPORT NUMBER** 86-1920

**TITLE** JOB ATTITUDES OF USAF CONTRACTING AND  
MANUFACTURING PERSONNEL

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Submitted to the faculty in partial fulfillment of  
requirements for graduation.

**AIR COMMAND AND STAFF COLLEGE**  
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## PREFACE

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The Leadership and Management Development Center at Maxwell AFB, AL has compiled a sizeable data base of responses to the Organizational Assessment Package survey. The data base, built through the consultation services provided to numerous commanders, includes responses from personnel in virtually every command and functional specialty. As such, it is an asset of which the Air Force can take great advantage when analyzing leadership and management practices. This report capitalizes on that asset by focusing on one subset of that data base.

At the request of the sponsor, the Leadership and Management Development Center, this research project was written in accordance with the style established by the American Psychological Association. It does, therefore, deviate somewhat from the style guide and conventions normally governing Air Command and Staff College research projects.

I want to give special thanks to those who have contributed to this project. To Major Mickey Dansby and Lieutenant Richard Lamb go special credit for their advice, editing skills, and expeditious data processing. Thanks are also due to Major Thomas Jones, my administrative advisor, who diligently reviewed the first draft and provided helpful comments. Finally, I thank my wife Anne not only for her love and patience during the long hours that I spent working on this project, but also for the time and energy she devoted to typing and editing this report.

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## ABOUT THE AUTHOR

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Major John M. Pace received his Bachelor of Science Degree in Engineering Management and a commission from the United States Air Force Academy in 1973. Upon graduation, he was assigned to the Air Force Contract Management Division in Anaheim, California as a contract administrator and Minute-man program control officer. In 1977, he graduated from the Air Force Institute of Technology at Wright-Patterson AFB, Ohio, received a Master of Science in Procurement Management, and was named a distinguished graduate. While at Wright-Patterson he served as a contract negotiator in the F-15 System Program Office. In 1979, he was assigned to the Secretary of the Air Force Office of Special Projects as an administrative contracting officer and contract management director. Major Pace was selected to attend the Air Command and Staff College (ACSC) at Maxwell AFB in 1985. He has also completed ACSC by correspondence and was a distinguished graduate from Squadron Officer School in 1978.

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## EXECUTIVE SUMMARY

- ★ Part of our College mission is distribution of the students' problem solving products to DoD sponsors and other interested agencies to enhance insight into contemporary, defense related issues. While the College has accepted this product as meeting academic requirements for graduation, the views and opinions expressed or implied are solely those of the author and should not be construed as carrying official sanction.

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REPORT NUMBER 86-1920

AUTHOR(S) MAJOR JOHN M. PACE, USAF

TITLE JOB ATTITUDES OF USAF CONTRACTING AND MANUFACTURING PERSONNEL

I. Purpose: To determine if there are significant differences between the job attitudes (as measured by the USAF Organizational Assessment Package) of personnel in the contracting and manufacturing career field and those of personnel in other Air Force career fields.

II. Problem: With the adoption of the All Volunteer Force, top Air Force leaders have become increasingly aware of the need to compete for personnel resources. The retention of qualified personnel is a key measure of the Air Force's success in meeting this need. While retention or separation statistics quantify this parameter, it is important for Air Force leaders to monitor factors which make the Air Force attractive to its members or employees before a separation decision is made. One method of monitoring these factors is to measure and analyze job attitudes. Prior research indicates that job attitudes influence behavior such as turnover, absenteeism, and attentiveness. Recommendations resulting from the analysis of attitudinal strengths and weaknesses can help commanders and functional managers refine their leadership and management practices in order to maximize the use of personnel resources.

III. Procedures: The Leadership and Management Development Center (LMDC) has used the Organizational Assessment Package

## **CONTINUED**

survey to provide management consulting services to Air Force commanders and has compiled a data base of over 200,000 survey responses. Using the LMDC data base, this project compared the demographic characteristics and job attitudes of contracting and manufacturing personnel (AFSC 65XX) to those of personnel in other career fields. Attitudinal data from both groups were compared by personnel category (i.e. officer to officer, enlisted to enlisted, and civilian to civilian) using two-tailed t-tests at a 95% confidence level to determine statistically significant differences. Results were compared with those of previous research conducted on the 65XX career field.

### **IV. Results and Conclusions:**

1. Officer and enlisted personnel in the contracting and manufacturing career field are better educated (formally and through professional military education) than their counterparts in other career fields.
2. Officers and civilian personnel in the 65XX career field express a greater intent to make the Air Force a career than do corresponding personnel in other career areas.
3. Contracting and manufacturing personnel of all categories have a higher degree of general satisfaction with their jobs than non-65XX personnel.
4. There is a significantly greater belief among contracting and manufacturing personnel that the skills and experience they have acquired will help prepare them for future opportunities.
5. The contracting and manufacturing career field provides enlisted personnel with more satisfying jobs.
6. In spite of more positive general job related satisfaction among 65XX officers and civilians, problems were identified in the "job itself" and "job enrichment" areas. Specifically, officers expressed less positive attitudes about Job Performance Goals, Job Feedback, and Job Related Training. Civilians reported less positive attitudes about Task Autonomy, Work Repetition, and Job Feedback.

### **V. Recommendations:**

1. Contracting and manufacturing officer performance goals should be defined in terms of maintaining an effective acquisition process (e.g., subjective goals such as the degree

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## **CONTINUED**

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of satisfaction program managers or commanders have with contracting and manufacturing support).

2. Contracting and manufacturing managers should improve the job performance feedback provided to officers and civilians in the career field.

3. Further research should be conducted to determine if officer training in the 65XX career field is deficient from either a quantitative or qualitative standpoint.

4. Contracting and manufacturing personnel managers should consider expanding the use of enlisted personnel into systems acquisition positions such as buyers or contract administrators.

5. Further research should be conducted to more clearly identify the nature and cause of the lower attitudes expressed by 65XX civilians in the autonomy and job enrichment areas.

## Chapter One

### INTRODUCTION

Over the past decade, Air Force leaders have become increasingly aware of the need to compete for personnel resources. This need was derived from the United States' abandonment of the draft and adoption of an All Volunteer Force (Mahr, 1982). The Air Force's success in this competition can be measured by examining its capability to meet recruiting goals (Gates, 1979). However, the competition for resources extends beyond entry level quotas or objectives. Retention of qualified personnel is perhaps an even more relevant measure of an organization's effectiveness in successfully competing for resources (Ebbert, 1982). While retention (or separation) statistics quantify the degree of success the Air Force achieves in retaining qualified personnel, it is extremely important for Air Force leaders to monitor factors which make the Air Force attractive to its members or employees before a separation decision is made. This report deals with those factors specifically as they relate to the contracting and manufacturing career field.

Top Air Force leaders have acknowledged the importance of these factors. In 1975, the Air Force Chief of Staff General

David C. Jones took steps to find out how Air Force life could be improved. One of his initiatives was to improve the leadership and management training and education provided to Air Force leaders and supervisors. Therefore, he established the Leadership and Management Development Center (LMDC) as part of the Air University at Maxwell AFB, Alabama (Short, 1985). LMDC became the focal point for leadership and management training for the Air Force and provided instruction and consultation services in the fields of leadership, management, and job enrichment (Dirnberger, 1980). The Organizational Assessment Package (OAP) survey was a tool designed to help LMDC perform these functions. The OAP identifies organizational strengths and weaknesses by surveying the attitudes of members of the organization (Short, 1985).

The attitudinal data gathered by the OAP are extremely valuable. Leaders need to understand the attitudes of their subordinates because attitudes can influence behavior (Sterrett, 1979). If attitudes are positive, the organization should benefit; if they are negative, the organization may suffer (Hodgetts, 1980). Lower turnover, lower absenteeism, and higher attentiveness (hence fewer accidents) are the consequences of favorable job attitudes (Mitchell & Scott, 1976). In 1980, Dirnberger concluded that the attitudinal information contained in the OAP data base was beneficial and consistent in identifying differences in attitudes in four major commands. This information, however, can also be useful when crossing

organizational lines.

Functional area resource managers can use these attitudinal data to help analyze leadership and management concerns within their respective career fields. Job attitude information is particularly useful in career fields where the expertise possessed by the member or employee is directly applicable to a job outside of the Air Force. The contracting and manufacturing career field (Air Force Specialty Code 65XX and its counterpart in civil service) is one such career field. If the attitudes of contracting and manufacturing personnel differ significantly from personnel in other Air Force career fields, then perhaps the resource managers of the 65XX career field will want to refine their leadership or management practices in order to maximize the use of functional personnel resources.

This research project focuses on the job attitudes of contracting and manufacturing personnel. Within that general area, the project concentrates on four objectives:

1. Conducting a review of relevant background literature to identify prior findings regarding the attitudes of 65XX personnel and to investigate job attitude and organizational behavior theory;
2. Comparing OAP-measured demographic characteristics and job attitudes of officers, enlisted personnel, and civilians in the contracting and manufacturing career field with those of corresponding personnel in other career fields;

3. Analyzing significant attitudinal differences between contracting and manufacturing personnel and other personnel; and,

4. Developing recommendations for contracting and manufacturing career field leaders and functional managers.

This report addresses each of these objectives. Chapter Two summarizes the results of the literature review and presents the formal research question pursued during the project. Chapter Three addresses the methodology used to answer this research question. Included in this chapter is a description of the OAP, a discussion of the data collection procedures, an overview of the contracting and manufacturing career field, and a presentation of the statistical procedures used to make data comparisons. Chapter Four presents the results of comparing personnel in the 65XX career field to personnel in other career fields on both a demographic and attitudinal basis. An analysis of the demographic characteristics and statistically significant attitudinal differences identified in Chapter Four is discussed in Chapter Five. This chapter addresses the strengths and weaknesses in 65XX personnel attitudes, identifies inconsistencies in results, and compares the results with previous findings. Finally, Chapter Six presents conclusions and offers recommendations on how leaders in the contracting and manufacturing career field can capitalize on attitudinal strengths and compensate for attitudinal weaknesses in the career field.

## Chapter Two

### LITERATURE REVIEW

Organizational theorists have conducted considerable research on the importance of job attitudes and their impact on organizations. Somewhat less research has been conducted on job attitudes within the Air Force. The development of the Organizational Assessment Package (OAP) survey has proven to be a significant step in facilitating the gathering and analysis of data concerning attitudes of Air Force members and employees. This chapter defines job attitudes and explains their impact on organizations. It then describes the development of a vehicle designed to measure Air Force job attitudes: the OAP. Next, this chapter presents some findings from previous research conducted on the attitudes of Air Force personnel in general and those of personnel in the contracting and manufacturing career field specifically. It concludes with a statement of the research question regarding job attitudes of the 65XX career field personnel.

A job attitude or job satisfaction is an intervening variable. That is, it intervenes between the causal variable, the situation surrounding one's job, and the result variable, one's behavior or actions in relation to that job (Hodgetts,

1980). It is the emotional state resulting from the appraisal of one's job or job experiences (Osborn, Hunt, & Jauch, 1980). In turn, that emotional state dictates a certain behavior. When the appraisal results in a positive emotional state, the employee enjoys an overall attitude of satisfaction with a desire to continue in and a willingness to strive for the goals and accept the values of a particular group or organization (Osborn et al., 1980). Researchers have also found job satisfaction to be highly correlated with productivity. However, more evidence exists to support a position that productivity leads to job satisfaction than vice versa (Davis, 1977; Lawler & Porter, 1967). On the other hand, low job satisfaction has resulted in absenteeism, turnover, and higher rates of accidents (Davis, 1977; Osborn et al., 1980). Since attitudes have an effect on behavior in an organization, they are well worth examining and understanding. However, as an intervening variable which reflects job conditions, job attitudes are useful concepts to study because they help identify the causal variables which drive the perceptions of an individual to be positive or negative. Once the causal variables are identified and analyzed, a leader or manager can make necessary adjustments to correct deficiencies or capitalize on strengths (Hodgetts, 1980).

In 1976, Hendrix began developing an approach for identifying causal variables through the measurement and analysis of job attitudes. He envisioned that this information would

be useful in improving leadership behavior. However, no suitable vehicle existed to gather this information. Therefore, in 1977 LMDC and the Air Force Human Resources Laboratory (AFHRL) began developing the OAP survey to measure attitudes about job satisfaction, organizational climate, perceived productivity, management/supervision, supervision/communications climate, and job inventory and to collect a considerable amount of demographic information about the respondent (Short, 1985). For the reader wanting more detail on the development of the OAP, Mahr (1982) and Short (1985) present a detailed summary of its history. The OAP became a key tool used by LMDC when conducting its leadership consultation services.

While to date LMDC has used the OAP principally in confidential response to requests from commanders for consultation services, some technical reports have been written based on OAP data. For example, in 1980 Dirnberger found a strong and consistent relationship between job motivation/satisfaction and command of assignment. His findings have encouraged the use of the OAP data base for command or career field attitudinal analysis. Other studies have focused on the differences between officer, enlisted, and civilian personnel. Ortaleb (1980) found that officer positions provide a greater opportunity for job enrichment than do enlisted positions. Boren (1980) discovered that enlisted personnel rated the core job dimensions (task identity, task significance, feedback, and

autonomy) lower than officers, while civilian Air Force employees rated those same dimensions higher than officers. This study corroborated Butler's (1979) findings that enlisted job satisfaction is lower than that of officers. Yet another category of research has concentrated on leadership and management principles. For example, Wilkerson and Short (1983), using OAP data, identified four essential supervisory functions: establishment of co-worker (peer) performance standards, training, feedback, and leadership development. In total, these studies suggest that the OAP data base can be useful in identifying job attitudes and causal variables from many perspectives.

The examination of individual career fields is one such perspective. Two projects have focused on the contracting and manufacturing career field. In Henderson's (1982) examination of matrixed verses non-matrixed 65XX personnel, he concluded that the matrix organizational approach can have both positive and negative impact on the attitudes of its members, depending on the flexibility of the member and the manager's ability to create a healthy environment in a complex situation. In the other study, Ibsen (1984) compared the job related perceptions of base contracting personnel with non-base contracting personnel. He found that base contracting officers expressed more positive views on work support, advancement and recognition, and the degree of work repetition, but were less positive than other officers on the clarity, specificity,

and realism of their job performance goals. Ibsen found base contracting enlisted job attitudes to be consistently more positive than other enlisted personnel with significant differences existing on 9 of 21 OAP factors: Task Characteristics, Skill Variety, Task Significance, Job Feedback, Need for Enrichment, Job Motivation, Pride, Advancement/Recognition and Job Related Satisfaction. The results of the comparison between base contracting civilians and other civilian Air Force employees were mixed, with more positive attitudes expressed by contracting personnel on the Work Repetition, Need for Enrichment, and Management/Supervision factors but more negative attitudes expressed in Task Autonomy, Job Feedback, and the Job Motivation Index.

This research project will be somewhat broader than that conducted by Ibsen (1984). While Ibsen focused on base contracting personnel, this project will include all contracting as well as all manufacturing personnel. Since base contracting authorizations only comprise about 30% of all 65XX authorizations (Johnson, 1983), it becomes difficult to predict the results of comparing all contracting and manufacturing personnel attitudes to those of other Air Force personnel based on Ibsen's research. Therefore, no directional hypothesis is offered for the conduct of this research. Rather, this research will be conducted in order to answer the following research question: Are there significant differences between the job attitudes (as measured by the USAF Organization

Assessment Package) of personnel in the contracting and manufacturing career field and those of personnel in other Air Force career fields?

The next chapter discusses the methodology used to pursue the answer to this question.

## Chapter Three

### METHODOLOGY

This chapter describes the methodology used to conduct this research. It first provides a description of the instrument used to gather data: the OAP survey. It then highlights the manner in which the data were collected using that survey. The third section of this chapter defines the two groups involved in the data comparison and characterizes the contracting and manufacturing career field. Finally, this chapter identifies the statistical tests used to compare the survey results for contracting and manufacturing personnel with those of the remaining data base group.

#### Instrumentation

The OAP survey consists of 16 demographic and 93 attitudinal items in the form of statements or questions. Responses to most of the survey items use a Likert scale of one to seven. A response value of "1" usually indicates strong disagreement or dissatisfaction with the question or statement while a value of "7" usually indicates strong agreement or satisfaction. Short (1985) discusses the makeup and structure of the OAP survey in considerable detail.

A survey's usefulness is determined to a large extent by its validity and reliability (Mahr, 1982). Short and Wilker-

son (1981) reported that the OAP survey has strong construct validity, meaning that it measures the concepts it was designed to measure. In 1981, Short and Hamilton concluded that the OAP shows acceptable to excellent reliability and, therefore, provides consistent and replicable results. These researchers determined validity and reliability by analyzing factors derived from a combination of the 93 attitudinal items or variables. A complete listing (including definitions) of the factors and variables is included as Appendix A. Hightower and Short (1982) found these factors to be highly stable and consistent. These studies have shown that the OAP has great value as a diagnostic or evaluation tool.

#### Data Collection

LMDC personnel collect OAP data when providing their consultation services. In response to an invitation by a commander, the LMDC researchers administer an initial (pre-intervention) survey to a census of personnel in group sessions at the organization or location visited. The responses to the survey and interviews are returned directly to LMDC where they are analyzed. Approximately six weeks after the initial visit, LMDC consultants conduct a tailored visit to the surveyed organization to present the results and provide recommendations to the commander and his supervisors. LMDC provides this feedback in a confidential manner. No individual is identified with a specific response to survey or

interview questions. Where problems are identified, the consultant and supervisor develop a corrective action plan to resolve the problem at that level of the organization. The LMDC consultants return after about six months to re-administer the OAP survey (post-intervention) and measure progress made in response to their recommendations and action plans. These procedures are fully discussed in The Commander's Guide to Air Force Leadership and Management Consultant Services (Leadership and Management Development Center, 1983).

Data gathered through the administration of the OAP are stored at LMDC in a cumulative data base containing almost 300,000 pre- and post-intervention records. Of this data base over 100,000 pre-intervention records in the current (i.e., since 1 Oct 81) file form the basis for this research. The data used for this study were collected during the period 1 October 1981 through 16 September 1985 and represent 174 visits to 54 bases/locations. Contracting and manufacturing personnel were surveyed at 43 of the 54 bases/locations visited. Using the demographic questionnaire items and other demographics collected on the answer sheet and stored on each record (e.g., personnel category, pay grade, age, sex, Air Force Specialty Code, base, and major command), data base analyses can be conducted from a number of perspectives and approaches.

### Subjects

Using the Air Force Specialty Code (AFSC) response associated with each record, this project compares the perceptions of all surveyed contracting and manufacturing personnel (AFSC 65XX) to those of other personnel with responses in the pre-intervention LMDC data base. The contracting and manufacturing personnel group (group 1) consists of officers, enlisted, and Air Force civil service personnel performing duties in AFSC 65XX. For this study the data base group (group 2) is comprised of people in the same personnel categories (but in different AFSC's) for the remainder of the data base. Sample sizes for the two groups are indicated in Table 1.

Table 1  
Number of 65XX Respondents and the LMDC Data Base

<u>Personnel Category</u>	<u>65XX</u>	<u>Data Base</u>
Officer	194 (24.6%)	12,516 (11.7%)
Enlisted	245 (31.1%)	70,302 (65.4%)
Civilian	350 (44.3%)	24,577 (22.9%)
Total	<u>789 (100.0%)</u>	<u>107,395 (100.0%)</u>

Contracting and manufacturing personnel are the government's representatives "charged with purchasing, manufacturing and delivery of systems, hardware, services and supplies under contract for the Air Force" (Johnson, 1983, p. 6).

There are five officer specialties within the career field:

1. AFSC 6524, Production/Manufacturing personnel who evaluate and monitor contractor production, manufacturing, and quality assurance programs;
2. AFSC 6534, Acquisition Contracting personnel who issue and administer government contracts;
3. AFSC 6544, Manufacturing Engineering personnel who manage industrial and manufacturing engineering activities;
4. AFSC 6516, Acquisition Contracting/Manufacturing Staff personnel who perform staff and management responsibilities; and,
5. AFSC 6596, Acquisition Contracting/Manufacturing Directors who formulate policy and programs and manage contracting, manufacturing, and other related 65XX functions (Johnson, 1983).

While Air Force civilians may occupy positions roughly equivalent to any of these AFSC's, enlisted personnel generally fill positions which are most closely related to the officer AFSC 6534.

In 1983, officer and enlisted personnel comprised only 12% and 11%, respectively, of the total authorizations for these five specialties (Johnson, 1983). Therefore, the career field

is highly civilianized. In addition, over 50% of all officer and civilian authorizations are in Air Force Systems Command and Air Force Logistics Command, while the enlisted workforce is concentrated almost exclusively in base contracting positions.

#### Procedures

This project compared the subjects described above (group 1) with the remainder of the LMDC data base personnel (group 2) on both a demographic and attitudinal basis. The SPSS<sup>X</sup> User's Guide (1983) describes the statistical procedures used to perform the analyses. Demographic information on both the subject group and the data base group characterizes the respondents in the LMDC pre-intervention data base. The SPSS<sup>X</sup> sub-program "Crosstabs" was used to analyze the demographic data.

Attitudinal data from both groups were compared by personnel category (i.e., officer to officer, enlisted to enlisted, and civilian to civilian) using two-tailed t-tests to determine statistically significant differences. The level of significance for all t-tests was alpha=.05 (i.e., the 95% confidence level), which is a generally accepted level in the social sciences. In addition, an F-test (also with a probability level of alpha=.05) was used to test the assumption of equal variances of the sample distributions for the two groups. Where appropriate, t-tests for unequal variance groups were used. These procedures identified factors in which the attitudes of 65XX personnel varied significantly from those of the data

base personnel. Factors falling into four groups were compared:

1. Work Itself. This group of six factors deals with the task properties and environmental conditions of the job. It measures perceptions of task characteristics.

2. Job Enrichment. The six factors in this group measure the degree to which the job itself is interesting, meaningful, challenging, and responsible.

3. Work Group Process. This category includes four factors and assesses the effectiveness and pattern of activity and interaction among group members.

4. Work Group Output. The five factors in this group measure task performance, group development, and the effects of the work situation on group members. They assess perceptions of the quality and quantity of task performance, pride, and satisfaction individuals have in their jobs.

Appendix A provides these definitions and includes a listing of the factors and variables contained in each of these areas.

Where significant differences occurred, follow-up t-tests or ANOVA tests were conducted to help identify the causes of the differences. In the officer personnel category, t-tests were performed on variables 206, 207, 208, and 719 to identify the causes of the differences in factors 805, Performance Barriers/Blockages, and 822, Job Related Satisfaction. In order to focus on the source of enlisted attitudinal differ-

ences, data from 65XX enlisted personnel assigned overseas were compared to those of 65XX enlisted personnel stationed stateside. And, in the civilian category, since many civilians in the contracting and manufacturing career field fill clerk/administrative positions, an Analysis of Variance (ANOVA) test was conducted on 65XX civilian responses to determine if attitudes differed significantly by grade. All follow-up tests were conducted at a significance level of alpha=.05.

#### Summary

This chapter detailed the methodology used to conduct this research. It included a description of the OAP, the manner in which data were collected, the subjects of the research, and the statistical procedures used to compare the responses of contracting and manufacturing personnel with those remaining in the LMDC data base. Chapter Four presents the results of these comparisons.

## Chapter Four

### RESULTS

This chapter presents the results of the demographic and attitudinal comparisons between the contracting and manufacturing personnel and all other personnel in the OAP pre-intervention data base. The first section characterizes the demographic profile of the officer, enlisted, and civilian respondents in each group. The second section concentrates on the comparison of job attitudes within each personnel category.

#### Demographics

Tables 2 through 7 provide demographic summaries for the contracting and manufacturing personnel and other personnel in the data base. When comparing the two groups, a number of differences can be identified. First, when compared to other career fields, there is a higher proportion of females in the enlisted and civilian personnel categories of the 65XX career field. Secondly, the contracting and manufacturing enlisted personnel are slightly older than their counterparts in other career fields. In addition, there is a greater percentage of officers and enlisted personnel in the 65XX career field with greater than 12 years of service. However, the

Table 2  
Sex by Personnel Category

<u>Personnel Category</u>	65XX		Data Base	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
Officer	170(87.6%)	24(12.4%)	10,929(87.6%)	1,554(12.4%)
Enlisted	185(75.5%)	60(24.5%)	61,955(88.3%)	8,201(11.7%)
Civilian	116(33.1%)	234(66.9%)	14,650(60.1%)	9,719(39.9%)
	<u>471(59.7%)</u>	<u>318(40.3%)</u>	<u>87,534(81.8%)</u>	<u>19,474(18.2%)</u>

Table 3  
Age by Personnel Category

n=	65XX			Data Base		
	Off(%) <u>194</u>	Enl(%) <u>245</u>	Civ(%) <u>350</u>	Off(%) <u>12,516</u>	Enl(%) <u>70,295</u>	Civ(%) <u>24,571</u>
17-20 yrs.	0.0	6.1	2.0	0.0	13.8	1.2
21-25 yrs.	10.8	35.1	7.1	12.3	38.1	6.2
26-30 yrs.	23.7	18.4	14.3	28.1	19.5	10.5
31-35 yrs.	23.7	20.0	12.6	23.4	14.5	14.4
36-40 yrs.	26.3	15.1	13.7	19.5	9.8	14.1
41-45 yrs.	10.3	4.1	15.1	11.0	2.9	12.5
46-50 yrs.	4.1	0.0	14.0	3.5	.7	14.0
>50 yrs.	1.0	1.2	21.1	2.2	.7	27.1
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

note: The number (n) is the total number of valid responses for the item being examined.

Table 4  
Time in Air Force

n=	65XX			Data Base		
	Off(%) <u>193</u>	Enl(%) <u>245</u>	Civ(%) <u>322</u>	Off(%) <u>12,496</u>	Enl(%) <u>70,115</u>	Civ(%) <u>21,790</u>
<1 yr.	1.6	6.1	3.7	3.3	7.0	5.1
1-2 yrs.	3.6	9.0	5.6	5.4	12.0	5.0
2-3 yrs.	5.2	8.2	5.6	7.7	12.5	5.2
3-4 yrs.	5.2	8.2	3.7	7.2	11.4	4.9
4-8 yrs.	20.7	22.4	15.2	21.7	20.5	11.9
8-12 yrs.	16.6	13.5	19.9	16.2	12.9	12.4
>12 yrs.	47.1	32.6	46.3	38.5	23.7	55.5
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Table 5  
Months in Present Career Field

n=	65XX			Data Base		
	Off(%) <u>193</u>	Enl(%) <u>245</u>	Civ(%) <u>346</u>	Off(%) <u>12,428</u>	Enl(%) <u>69,892</u>	Civ(%) <u>23,928</u>
<6 mos.	4.1	6.9	7.2	5.3	4.9	5.6
6-12 mos.	7.8	6.9	5.8	7.6	8.0	7.3
12-18 mos.	7.3	9.4	9.8	7.9	8.2	6.0
18-36 mos.	17.1	23.3	16.8	21.7	20.9	13.4
>36 mos.	63.7	53.5	60.4	57.5	58.0	67.7
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Table 6  
Months at Present Duty Station

n=	65XX			Data Base		
	Off(%) <u>192</u>	Enl(%) <u>245</u>	Civ(%) <u>342</u>	Off(%) <u>12,479</u>	Enl(%) <u>69,949</u>	Civ(%) <u>24,012</u>
<6 mos.	17.2	20.0	8.2	13.8	15.4	6.3
6-12 mos.	14.1	18.4	11.1	16.5	18.5	7.8
12-18 mos.	18.2	16.3	11.7	16.4	16.1	6.1
18-36 mos.	34.4	31.8	10.8	36.0	32.2	15.1
>36 mos.	16.1	13.5	58.2	17.3	17.8	64.7
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Table 7  
Months in Present Position

n=	65XX			Data Base		
	Off(%) <u>192</u>	Enl(%) <u>242</u>	Civ(%) <u>345</u>	Off(%) <u>12,467</u>	Enl(%) <u>69,860</u>	Civ(%) <u>24,164</u>
<6 mos.	35.4	48.3	17.1	26.4	27.6	13.9
6-12 mos.	21.9	21.9	15.4	24.6	24.1	14.8
12-18 mos.	19.8	14.5	15.4	17.0	16.4	10.2
18-36 mos.	20.3	13.6	22.9	24.8	22.7	19.5
>36 mos.	2.6	1.7	29.2	7.2	9.2	41.6
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

opposite is true of civilian personnel. While 65XX officers have slightly more time in their career field, 65XX enlisted and civilian personnel have slightly less time in their career field than do their counterparts in the data base. Two demographic parameters that are consistent across all personnel categories involve time on station and time in current position. There is a lower percentage of 65XX personnel with at least 18 months time on station or time in current position than reported for the remainder of the OAP data base.

Additional demographic information is contained in tables B-1 through B-16 in Appendix B. These tables show that the ethnic grouping and marital status of contracting and manufacturing personnel are roughly similar to those of personnel in other career fields. The education levels of officers and enlisted personnel are among the demographic differences. The contracting and manufacturing respondents have a higher percentage of enlisted personnel with college experience and officers with master's degrees. Both officers and enlisted 65XX personnel have more professional military education than do the corresponding respondents in other career fields. Other differences include the fact that 65XX enlisted and civilian personnel have fewer supervisory and appraisal responsibilities, that all 65XX personnel categories report a higher percentage of dayshift working hours, and that all contracting and manufacturing personnel categories report

a higher percentage of career-oriented respondents. Finally, there is about a 50/50 split between 65XX personnel assigned to systems/central acquisition positions and those assigned to base procurement positions.

These data describe the differences between the contracting and manufacturing personnel and the remaining personnel in the OAP pre-intervention data base from a demographic standpoint. The next section addresses attitudinal differences identified through a statistical comparison of the two groups' responses to the OAP survey.

#### Attitudes

The analysis of OAP data identified a considerable number of significant attitudinal differences between 65XX personnel and the remainder of the OAP data base. Differences occurred in all personnel categories.

#### Officers

The comparison between contracting and manufacturing officers and other officers revealed significant differences on 10 of 21 OAP factors. The 10 factors with differences are listed in Table 8. These findings indicate that 65XX officers have a lesser ability to clearly identify Job Performance Goals. This fact is combined with the perception that 65XX officers do not receive as clear and direct information about their performance as do other officers. The 65XX officers also rate Task Characteristics and Task Identity lower than

Table 8  
Summary of Significant Differences in Officer Attitudes

<u>Factor</u>	<u>Mean Values</u>	
	<u>65XX Officers</u>	<u>Other Officers</u>
Job Performance Goals	4.55	4.72
Task Characteristics	5.15	5.34
Work Repetition	3.87	4.32
Desired Repetitive/Easy Tasks	2.31	2.48
Job Related Training	4.34	4.69
Task Identity	5.01	5.22
Job Feedback	4.63	4.89
Work Support	4.78	4.55
Advancement/Recognition	4.85	4.57
Job Related Satisfaction	5.53	5.36

other officers do. This means that contracting and manufacturing officers have more difficulty identifying with a complete piece of work, from beginning to end. In addition, 65XX officers report lower satisfaction with the on-the-job training and technical training which they receive. Although the statistical tests indicate significantly less positive attitudes in these areas, 65XX officers reported more positive attitudes for three factors in the "work group process" and "work group output" subsets of factors.

Contracting and manufacturing officers are generally more satisfied with the factors surrounding their jobs than are their counterparts in other career fields. They consider themselves better prepared to compete for advancement and promotion and, as the comparison of responses to variable 719 indicates, are more apt to feel that they have acquired skills which have prepared them for future opportunities. The data pertaining to variables 206, 207, and 208 (see Table C-2) show that they also perceive themselves as less likely to be encumbered with additional duties and details. Finally, 65XX officers perceive themselves as having less repetition in the tasks and problems associated with their work than do their counterparts in other career fields.

#### Enlisted Personnel

While 65XX officers reported attitudes which are lower than the data base for some factors and higher for others, the differences in enlisted attitudes are markedly uni-direc-

tional. Contracting and manufacturing enlisted personnel reported significantly higher attitudes on 14 OAP factors spanning all four factor groupings. On only one factor, Desired Repetitive Tasks, did 65XX enlisted respondents record a significantly lower score. Table 9 summarizes these results.

Within the "work itself" grouping of factors, 65XX enlisted personnel perceived a higher degree of Task Autonomy in their jobs. They feel they have more discretion in scheduling, decisionmaking, and performing their job as they see fit than do enlisted personnel in other fields.

Contracting and manufacturing enlisted personnel scored significantly higher attitudes on all of the factors within the "job enrichment" grouping. They perceive their jobs more positively in the following areas:

1. The job requires a number of important skills and talents (Skill Variety);
2. The job consists of whole, identifiable pieces of work (Task Identity);
3. The job is important and impacts others (Task Significance);
4. Workers obtain clear and direct feedback on their performance (Job Feedback);
5. The job itself inspires high internal motivation within the worker (Job Motivation Index); and,
6. They also desire these characteristics (Need for Enrichment).

Table 9  
Summary of Significant Differences in Enlisted Attitudes

<u>Factor</u>	<u>Mean Values</u>	
	<u>65XX Enlisted</u>	<u>Other Enlisted</u>
Task Characteristics	5.33	5.04
Task Autonomy	4.19	3.83
Desired Repetitive/Easy Tasks	2.86	3.22
Skill Variety	4.96	4.60
Task Identity	5.39	5.05
Task Significance	5.95	5.70
Job Feedback	4.96	4.76
Need for Enrichment	5.90	5.47
Job Motivation Index	118.17	100.39
Organizational Communications Climate	4.62	4.38
Pride	5.31	4.90
Advancement/Recognition	4.59	4.26
Perceived Productivity	5.71	5.46
Job Related Satisfaction	5.49	4.95
General Organizational Climate	4.64	4.40

In sum, the 65XX jobs, as perceived by enlisted personnel in that career field, are more enriched than other enlisted jobs and are higher in many desirable job characteristics.

Similar positive findings occurred within the "work group output" factors. Contracting and manufacturing enlisted personnel have significantly higher pride in their work. They feel that their work group generates a higher quantity and quality of work than other work groups and, like officers, perceive the skills they possess as valuable to promotion opportunities. They also find their organizational climate and the communications within their organization to be more positive. These positive results are accompanied by the finding that 65XX enlisted personnel are significantly more satisfied with the factors surrounding their jobs than other enlisted personnel. In addition, there is no significant difference in these positive attitudes between 65XX enlisted personnel stationed overseas and those in stateside assignments.

#### Civilians

Whereas 65XX enlisted personnel responded with consistently higher attitudes about their jobs, 65XX civilian attitudes are higher on some factors and lower on others when compared to their counterparts in other career fields. These differences are summarized in Table 10.

Contracting and manufacturing civilians believe they have

Table 10  
Summary of Significant Differences in Civilian Attitudes

<u>Factor</u>	<u>Mean Values</u>	
	<u>65XX Civilians</u>	<u>Other Civilians</u>
Task Autonomy	4.41	4.59
Work Repetition	4.80	4.64
Job Feedback	4.86	5.06
Need for Enrichment	5.86	5.70
Job Motivation Index	122.45	131.29
Work Support	4.79	4.67
Advancement/Recognition	4.02	3.79
Job Related Satisfaction	5.54	5.42

significantly less discretion in accomplishing their own work. Their work contains a significantly higher proportion of repetitive tasks and offers a significantly lower degree of motivation to the worker. Civilians in the 65XX career field feel that they obtain less direct and clear feedback on the quality of their performance. Moreover, they have a significantly higher desire for job enrichment (autonomy, personal growth, task variety, etc.) than do other Air Force civilian employees. A comparison among the grades of civilian personnel resulted in no significant differences being found (Table C-6, Appendix C). While some of the ANOVA F-ratios were significant, the Newman-Keuls post hoc test showed that no single grade was significantly different from any other.

Civilian employees in the 65XX career field did, however, record significantly higher mean scores for three factors. Like officers and enlisted personnel, civilians in the 65XX career field perceive their potential and preparation for Advancement/Recognition and Job Related Satisfaction to be significantly higher than their counterparts in other career fields. In addition, 65XX civilians feel less hindered by additional duties or inadequate tools and equipment than other civilians.

Detailed statistical findings associated with comparing the attitudes of 65XX personnel with those of other personnel are included as Tables C-1 through C-6 in Appendix C.

### Summary

This chapter presented the results of the demographic and attitudinal comparisons between officer, enlisted, and civilian personnel in the 65XX career field and their counterparts in other career fields. It highlighted those factors in which 65XX personnel attitudes significantly deviated from those of other personnel. The possible causes and implications of these results are discussed in the next chapter.

## Chapter Five

### DISCUSSION

The preceding chapter presented demographic data on officer, enlisted, and civilian personnel in the contracting and manufacturing career field. It also identified those OAP factors in which 65XX personnel attitudes differed significantly from those of other personnel. This chapter explores those significant differences by discussing the strengths, problem areas, and inconsistencies discovered in the results. The discussion deals with each personnel category individually.

#### Officers

This research corroborated the significant differences in officer attitudes identified by Ibsen (1984) in his study of base contracting personnel. Specifically, this project found officer attitudes to be more positive in Work Repetition, Work Support, and Advancement/Recognition while finding officer attitudes on Job Performance Goals to be less favorable. However, this research also uncovered other significant differences.

The findings indicate a number of demographic and attitudinal strengths of 65XX officers, and, although the demographic results were derived "by inspection" of data rather

than statistical analysis, they are, nonetheless, important. The higher average level of formal and professional military education (PME) and their higher expressed career orientation are two findings which should please 65XX functional managers. Among the more important attitudinal findings is the general satisfaction 65XX officers express about their jobs. A major contributor to the Job Related Satisfaction factor is variable 719 (see table C-2). These officers perceive themselves as having acquired valuable skills which will prepare them for future opportunities. However, these opportunities may lie within or outside of the Air Force. Since there is a higher proportion of 65XX officers with greater than 12 years of service than there is in the data base at large, the prospect of post-retirement employment is, perhaps, very important to this group. The fact that this more senior 65XX officer group feels more prepared for future opportunities could indicate that they believe their expertise has civilian application. Contracting and manufacturing officers also are significantly more aware of their potential for advancement and recognition.

In addition to these strengths, a few problem areas were identified. Contracting and manufacturing officers expressed less favorable attitudes in three important areas. First, they recorded lower Job Performance Goals scores. This may be due in part to the fact that 65XX officers have less time in their current positions and, therefore, have difficulty

defining clear, specific, and understandable goals. Secondly, they have lower Task Identity and Job Feedback. It is often impossible for 65XX officers to see the results of their efforts, whether good or bad. In fact, a complete job is frequently nonexistent for many 65XX officers, particularly those in the systems acquisition process where it takes years to see the results of a contract written or manufacturing process implemented to acquire a defense system. Thirdly, 65XX officers were significantly less satisfied with the technical and on-the-job training they received.

With this collection of negative results in the "job itself" and "job enrichment" groupings of OAP factors, it appears inconsistent that 65XX officers also express significantly higher job satisfaction. This inconsistency may be due to the fact that, while the nature of the 65XX job does not have many of the job enrichment characteristics, officers find the value of their skill and experience to overwhelm these apparent shortcomings. It is also possible that 65XX officers, while not satisfied with such factors as feedback, training, completeness of tasks, and job goals, recognize the process orientation of their jobs. Contract and manufacturing management jobs are frequently less concerned with accomplishment of specific tasks than with the management of the acquisition process. It is difficult to describe these positions in terms of concrete job responsibilities.

In summary, there are many positive characteristics of the officer 65XX jobs. However, the analysis of contracting and manufacturing officer job attitudes also identifies a number of areas in which improvement should be sought.

Enlisted

The comparison of the 65XX enlisted job attitudes with those of other enlisted personnel yields remarkable results. In all four OAP factor areas--work itself, job enrichment, work group process, and work group output--contracting and manufacturing enlisted personnel expressed more positive job attitudes. These results corroborate Ibsen's (1984) findings which is not surprising since most enlisted personnel in the 65XX career field are involved in base level contracting, the subject of Ibsen's research. Whereas Ibsen found significant attitudinal differences on 9 of 21 OAP factors, this research found significant differences for 15 of 21 factors.

The overwhelmingly positive attitudes expressed by enlisted personnel in the 65XX career field seem to indicate that their jobs are classic examples of enriched jobs. All the job enrichment factors analyzed in this project (Skill Variety, Task Identity, Task Significance, Job Feedback, Need for Enrichment, and Job Motivation Index) are significantly more positive for 65XX enlisted personnel. Moreover, the factors measuring task performance and group development were

also significantly higher for 65XX enlisted personnel than for other enlisted personnel. Therefore, this group perceives greater pride in the performance achieved through their enriched jobs. These results indicate that the contracting and manufacturing career field provides challenging, meaningful, and satisfying work for enlisted personnel.

These positive attitudes are not the only strengths characterizing this group. Contracting and manufacturing enlisted personnel are better educated (both formal and PME) than their counterparts in other career fields. They also are older and have a larger percentage of members with over 12 years of service. So this sample group consists of more mature, better educated individuals.

In sum, this research identified no problem areas or inconsistencies in the 65XX enlisted personnel group. On the contrary, the state of affairs surrounding this group is extremely positive.

#### Civilians

The 65XX civilian employees with responses in the OAP data base expressed both significantly higher and lower job attitudes compared to the remainder of the data base. Like their officer and enlisted colleagues, 65XX civilians provided significantly higher responses in the factors dealing with Advancement/Recognition and Job Related Satisfaction. To restate, the 65XX career field seems to develop skills

which its members perceive as valuable to future opportunities. This strength, however, can be a liability if employers outside the Air Force can attract members to more satisfying jobs.

With this in mind, the problem areas identified for civilian personnel can be quite troubling. The problem areas pertain to the nature of the civilians' tasks and the degree of enrichment contained within their jobs. Contracting and manufacturing civilians expressed a significantly higher desire for enriched jobs but also perceived their jobs as not containing enriched characteristics. Contracting and manufacturing civilians report significantly less Task Autonomy, more Work Repetition, and lower Job Feedback, and generate a lower overall Job Motivation Index (JMI) than their counterparts in other career fields. Although Ibsen (1984) found significantly less Work Repetition in his examination of base contracting personnel, he discovered similar differences in the autonomy, feedback and JMI areas.

A possible explanation for these results is the high proportion of 65XX civilians in clerical grades where job tasks are frequently quite routine and repetitive. Table B-16 summarizes the 65XX civilian OAP sample by grade. About one half of the 65XX civilians are of grades GS-7 or lower. In an attempt to attribute the low job enrichment results to the clerical positions, an ANOVA test was conducted on the

mean scores for Job Feedback, Need for Enrichment Index, Job Motivation Index, Task Autonomy, Work Repetition, and Job Related Satisfaction by grade. But, as pointed out in Chapter Four, the analysis did not identify a statistically significant difference between the mean scores of each grade. Therefore, the cause for lower 65XX civilian scores must lie elsewhere.

One cause for the unfavorable job attitudes of this group may be the inability of the contracting buyer/clerk to implement the results of his or her work. Buyers and clerks, usually in grades below GS-12, are frequently tasked to work procurement actions or other administrative tasks associated with the generation and administration of contracts but, because they are not warranted contracting officers, cannot legally bind the government. Thus, their work is subject to contracting officer approval, a possible procurement committee review, and a legal review. These iterative reviews may detract from a sense of wholeness or autonomy in their work.

The inconsistency between the 65XX civilians' expressed job satisfaction and the problem areas addressed above is also interesting. This inconsistency, which occurred in the officer comparison as well, perhaps reflects a pragmatic acceptance of the nature of their jobs and the legal limitations that go therewith. In addition, they may consider their acquired skills and the opportunities those skills provided to them to be of sufficient value to overcome the dissatisfiers in their

jobs. In any case, the existence of significantly lower 65XX civilian attitudes in the autonomy and job enrichment areas should be of some concern to resource managers.

#### Summary

This chapter discussed the significant differences in the attitudes of contracting and manufacturing personnel when compared to personnel in other career fields. Both officer and civilian personnel expressed more positive attitudes on selected factors within the "work group process" and "work group output" areas while simultaneously expressing less positive attitudes for certain factors within the "work itself" and "job enrichment" areas. The attitudes of enlisted personnel in the 65XX career field are significantly more positive across the board. The discussion of these differences provides the basis for the conclusions and recommendations offered in Chapter Six.

## Chapter Six

### CONCLUSIONS AND RECOMMENDATIONS

This final chapter provides a series of conclusions and recommendations for use by the functional managers of the contracting and manufacturing career field. The conclusions and recommendations are based on the attitudinal and demographic results presented in Chapter Four and the discussion in Chapter Five. The first section of this chapter recaps the nature of job satisfaction as an intervening variable and the manner in which data were gathered to perform this research. The next two sections present conclusions and recommendations, respectively. The last section of this chapter summarizes this research project.

#### The Intervening Variable

Chapter Two fully discusses the nature of job satisfaction as an intervening variable which captures the emotional state resulting from the appraisal of one's job. This intervening variable, in turn, governs the behavior of the worker. The degree of satisfaction experienced in a job has been shown to be highly correlated with absenteeism, turnover, and accidents (Davis, 1977; Osborn et al., 1980).

LMDC and AFHRL developed the Organizational Assessment

Package to measure job satisfaction and attitudes (Short, 1985). Organizational and functional managers use this tool to identify and analyze the causes of significant differences in job attitudes and make management adjustments to correct deficiencies or capitalize on strengths. This research used the OAP data base compiled over a four-year period to compare the attitudes of contracting and manufacturing personnel to those of personnel in other career fields. This comparison, the results of which are presented in Chapter Four and discussed in Chapter Five, yielded significant findings from which the following conclusions and recommendations are drawn.

#### Conclusions

The conclusions resulting from this research are as follows:

1. Officer and enlisted personnel in the contracting and manufacturing career field are better educated (formally and through PME) than their counterparts in other career fields.
2. Officers and civilian personnel in the 65XX career field express a greater intent to make the Air Force a career than do corresponding personnel in other career areas.
3. Contracting and manufacturing personnel of all categories have a significantly higher degree of general satisfaction with their jobs than non-65XX personnel.

4. There is a significantly greater belief among contracting and manufacturing personnel that the skills and experience they have acquired will help prepare them for future opportunities.

5. The contracting and manufacturing career field provides enlisted personnel with more satisfying jobs. No significantly less favorable attitudes were discovered among 65XX enlisted personnel.

6. In spite of more positive general job related satisfaction among 65XX officers and civilians, problems were identified in the "job itself" and "job enrichment" areas. Specifically, officers expressed significantly less positive attitudes for Job Performance Goals, Job Feedback, and Job Related Training. Civilians reported significantly less positive attitudes for Task Autonomy, Work Repetition, and Job Feedback.

#### Recommendations

The findings and conclusions associated with this research lead to a number of recommendations for 65XX resource managers. These recommendations are based on the more important findings and conclusions presented earlier.

1. Contracting and manufacturing officer performance goals should be defined in terms of maintaining an effective acquisition process. Goals expressed in terms of accomplishment of specific quantifiable tasks (e.g., number of contract

actions completed, change orders written, or manufacturing process evaluations) can be shortsighted because they are somewhat artificial and may detract from the effective execution of acquisition tasks. Instead, the use of subjective goals, such as degree of satisfaction of program managers or commanders with contracting and manufacturing support, is preferable.

2. Contracting and manufacturing managers should provide their workers with frequent and specific feedback on their performance. Improvement in feedback seems to be especially required for officers and civilian personnel. Because the results of their efforts frequently cannot be determined for long periods of time, these personnel require qualitative feedback from their supervisors.

3. Further research should be conducted to determine if officer training in the 65XX career field is deficient from either a quantitative or qualitative standpoint. Less favorable officer attitudes may indicate a problem in this area. Functional managers and supervisors should take appropriate steps to improve training.

4. Contracting and manufacturing personnel managers should consider extending the use of enlisted personnel into systems acquisition positions such as buyers or contract administrators. The current use of enlisted personnel almost exclusively in base procurement positions may be unnecessarily

limiting the contribution they can make in the career field. The Air Force should capitalize on the strengths identified in this research in 65XX enlisted personnel by providing system acquisition opportunities to specially selected members of this group.

5. Further research should be conducted to more clearly identify the nature and cause of the lower attitudes expressed by 65XX civilians in the autonomy and job enrichment areas. Such research should identify jobs with the need and potential for enrichment.

These recommendations were developed from an analysis of a sizeable attitudinal and demographic data base. They should guide 65XX resource managers' actions in developing a more satisfied and effective personnel resource.

#### Summary

This research project accomplished four basic objectives. First, it conducted a literature review to investigate the important role of job attitudes in governing worker behavior and to identify prior findings regarding the attitudes of 65XX personnel. Secondly, this project compared demographic and attitudinal data compiled on 65XX personnel with those of personnel in other career fields. Thirdly, it analyzed the significant differences in demographics and attitudes between 65XX personnel and all other personnel in the OAP data base. And, finally, it developed conclusions and recommendations

for the use of functional leaders in managing contracting and manufacturing personnel.

This project answered the following research question: Are there significant differences between the job attitudes (as measured by the USAF OAP) of personnel in the contracting and manufacturing career field and those of personnel in other Air Force career fields? There are some significantly positive findings regarding these attitudes as well as some unfavorable findings which may trouble 65XX functional managers. Any effort expended to mitigate the problem areas will have considerable payoff. Contracting and manufacturing personnel attitudes would improve and ultimately help the Air Force successfully meet any retention challenges that affect the 65XX career field.

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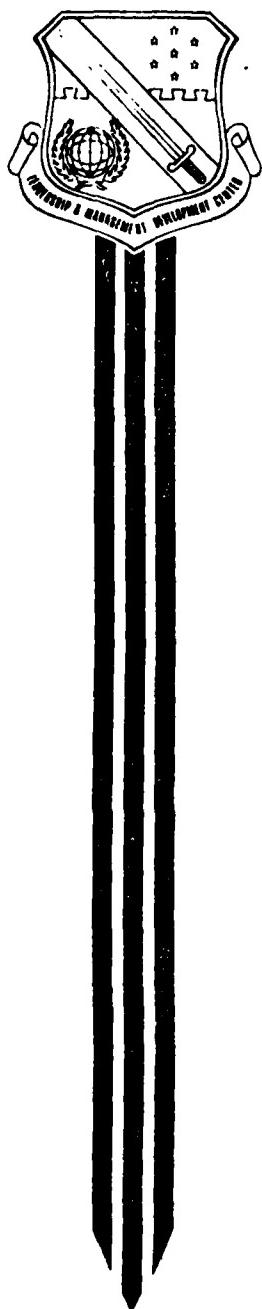
## APPENDIX

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### APPENDIX A

#### OAP Factors and Variables



## **ORGANIZATIONAL ASSESSMENT PACKAGE SURVEY**

**FACTORS**

**AND**

**VARIABLES**

**JANUARY 1986**

**LEADERSHIP AND MANAGEMENT DEVELOPMENT CENTER  
AIR UNIVERSITY  
Maxwell Air Force Base, Alabama 36112-5712**

**FACTORS AND VARIABLES OF THE  
ORGANIZATIONAL ASSESSMENT PACKAGE**

The OAP is a 109-item survey questionnaire designed jointly by the Air Force Human Resources Laboratory and the Leadership and Management Development Center (LMDC) and is used to aid LMDC in its mission to: (a) conduct research on Air Force system issues using information in the OAP database; (b) provide leadership and management training, and (c) provide management consultation service to Air Force commanders upon request.

Allowable responses to the attitudinal items on the survey range from 1 (low) to 7 (high). The attitudinal items are grouped into 25 factors that address such areas as the job itself, management and supervision, communications, and performance in the organization. Each data record consists of 7 externally coded descriptors and 24 demographic items as well as the responses to the 93 attitudinal items.

The factors measured by the OAP are grouped into a systems model to assess three aspects of a work group: input, process, and output (adapted from McGrath's model).

Input. In LMDC's adaptation of the model, input is comprised of demographics, work itself, and job enrichment.

A. Demographics. Descriptive or background information about the respondents to the OAP survey.

B. Work Itself. The work itself has to do with the task properties (technologies) and environmental conditions of the job. It assesses the patterns of characteristics members bring to the group or organization, and patterns of differentiation and integration among position and roles. The following OAP factors measure the work itself:

- 806 - Job Desires (Need For Enrichment)
- 810 - Job Performance Goals
- 812 - Task Characteristics
- 813 - Task Autonomy
- 814 - Work Repetition
- 816 - Desired Repetitive Easy Tasks
- 823 - Job Related Training

Job Influences (not a statistical factor)

C. Job Enrichment. Measures the degree to which the job itself is interesting, meaningful, challenging, and responsible. The following OAP factors measure job enrichment:

- 800 - Skill Variety
- 801 - Task Identity
- 802 - Task Significance
- 804 - Job Feedback
- 806 - Need for Enrichment Index (Job Desires)
- 807 - Job Motivation Index

Work Group Process. The work group assesses the pattern of activity and interaction among the group members. The following OAP factors measures leadership and the work group process:

- 805 - Performance Barriers/Blockages (Work Support)
- 818 - Management and Supervision
- 819 - Supervisory Communications Climate
- 820 - Organizational Communications Climate
- Work Interferences (not a statistical factor)
- Supervisory Assistance (not a statistical factor)

Work Group Output. Measures task performance, group development, and effects on group members. Assesses the quantity and quality of task performance and alteration of the group's relation to the environment. Assesses changes in positions and role patterns, and in the development of norms. Assesses changes on skills and attitudes, and effects on adjustment. The following OAP factors measure the work group output:

- 811 - Pride
- 817 - Advancement/Recognition
- 821 - Work Group Effectiveness (Perceived Productivity)
- 822 - Job Related Satisfaction
- 824 - General Organizational Climate

**EXTERNALLY CODED DESCRIPTORS**

- Batch Number
- Julian Date of Survey
- Major Command
- Base Code
- Consultation Method
- Consultant Code
- Survey Version

(Note: These items are concatenated to each data record during TDP processing.)

DEMOGRAPHIC ITEMS (NOT A STATISTICAL FACTOR)

Variable Number		Statement Number	Statement	Statement
				Total months in present career field:
	004			2
-	-	1.	Less than 1 month	
-	-	2.	More than 1 month, less than 6 months	
-	-	3.	More than 6 months, less than 12 months	
-	-	4.	More than 12 months, less than 18 months	
-	-	5.	More than 18 months, less than 24 months	
-	-	6.	More than 24 months, less than 36 months	
-	-	7.	More than 36 months	
Total months at this station:				
				1.
				2.
				3.
				4.
				5.
				6.
				7.
Total months in present position:				
				1.
				2.
				3.
				4.
				5.
				6.
				7.
Tour Ethnic Group is:				
				1. American Indian or Alaskan Native
				2. Asian or Pacific Islander
				3. Black, not of Hispanic Origin
				4. Hispanic
				5. White, not of Hispanic Origin
				6. Other
Which of the following "best" describes your marital status?				
				1. Not married.
001	-	(Not used)		2. Married: Spouse is a civilian employed outside home.
002	-	(Not used)		3. Married: Spouse not employed outside home.
003	1			4. Married: Spouse not geographically separated.
				5. Married: Spouse is a military member.
				6. Married: Spouse is a military member.
				7. Single parent.
Total years in the Air Force:				
				1.
				2.
				3.
				4.
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<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>	<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>
009	6	Your highest education level obtained is:			
		1. Non-high school graduate			
		2. High school graduate or GED			
		3. Less than two years college			
		4. Two years or more college			
		5. Bachelor's Degree			
		6. Masters Degree			
		7. Doctoral Degree			
010	7	Highest level of professional military education (residence or correspondence):			
		0. None or not applicable			
		1. NCO Orientation Course or USAF Supervisor Course (NCO Phase 1 or 2)			
		2. NCO Leadership School (NCO Phase 3)			
		3. NCO Academy (NCO Phase 4)			
		4. Senior NCO Academy (NCO Phase 5)			
		5. Squadron Officer School			
		6. Intermediate Service School (i.e., ACSC, AFSC)			
		7. Senior Service School (i.e., AAC, ICAF, NMIC)			
011	8	How many people do you directly supervise?			
		1. None	5.	4 to 5	
		2. 1	6.	6 to 8	
		3. 2	7.	9 or more	
		4. 3			
012	9	For how many people do you write performance reports?			
		1. None	5.	4 to 5	
		2. 1	6.	6 to 8	
		3. 2	7.	9 or more	
		4. 3			
013	10	Does your supervisor actually write your performance reports?			
		1. Yes	2. No	3. Not sure	

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- Does your supervisor actually write your performance reports?
1. Yes
  2. No
  3. Not sure

- What is your aeronautical rating and current status?
1. Monitored, not on discrete
  2. Monitored, now on discrete
  3. Rated, in crew/operations job
  4. Rated, in support job

What is your usual work schedule?

1. Day shift, normally stable hours
2. Swing shift (about 1600-2400)
3. Mid shift (about 0800-0800)
4. Rotating shift/schedule
5. Day or shift work with irregular/unstable hours
6. Frequent TDY/travel or frequently on-call to report to work
7. Crew schedule

Your work requires you to work primarily:

1. Alone
2. With one or two people
3. As a small work group (3-5 people)
4. As a large work group (6 or more people)
5. Other

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>	<u>FACTOR</u>
------------------------	-------------------------	------------------	---------------

- 019      16      Which of the following best describes your career or employment intentions?
1. Planning to retire in the next 12 months
  2. Will continue in/with the Air Force as a career
  3. Will most likely continue in/with the Air Force
  4. May continue in/with the Air Force
  5. Will most likely not make the Air Force a career
  6. Will separate/terminate from the Air Force as soon as possible

NOTE: Variable 008, Statement 11 was added to the OAP on 19 Jan 80 and replaced variable 014 which appears on page 6. Although no longer used, Variable 014 is still shown because data collected from about 25,000 samples for this variable are still in the data base.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>	<u>FACTOR</u>
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Each 800 series factor consists of two or more variables which correspond to statements in the OAP. A mean score can be derived for each factor except 805, 807, 808, 809 and 812 by using a "straight average." The formula for computing the exceptions is indicated.

FACTOR 800 - SKILL VARIETY: Measures the degree to which a job requires a variety of different tasks or activities in carrying out the work; involves the use of a number of different skills and talents of the worker; skills required are valued by the worker.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>	<u>FACTOR</u>
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FACTOR 800 - SKILL VARIETY: Measures the degree to which a job requires a variety of different tasks or activities in carrying out the work; involves the use of a number of different skills and talents of the worker; skills required are valued by the worker.

To what extent does your job require you to use a number of complex skills?

FACTOR 801 - TASK IDENTITY: Measures the degree to which the job requires completion of a "whole" and identifiable piece of work from beginning to end.

<u>Variable Number</u>	<u>Statement Number</u>	<u>Statement</u>	<u>FACTOR</u>
------------------------	-------------------------	------------------	---------------

To what extent does your job involve doing a whole task or unit of work?

To what extent does your job provide you with a chance to finish completely the piece of work you have begun?

**FACTOR B02 - TASK SIGNIFICANCE:** Measures the degree to which the job has a significant impact on the lives or work of others; the importance of the job.

**Variable Number Statement**

Variable Number	Statement
203	19 To what extent is your job significant in that it affects others in some important way?
210	27 To what extent does doing your job well affect a lot of people?

**FACTOR B03 (NOT USED)**

**FACTOR B04 - JOB FEEDBACK:** Measures the degree to which carrying out the work activities required by the job results in the worker obtaining clear and direct information about job outcomes or information on good and poor performance.

**Variable Number Statement**

Variable Number	Statement
272	22 To what extent are you able to determine how well you are doing your job without feedback from anyone else?

**FACTOR B05 - WORK SUPPORT:** Measures the degree to which work performance is hindered by additional duties, details, inadequate tools, equipment, or work space.

**Variable Number Statement**

Variable Number	Statement
206	23 To what extent do additional duties interfere with the performance of your primary job?
207	24 To what extent do you have adequate tools and equipment to accomplish your job?

To what extent is the amount of work space provided adequate?

Formula  $(18-206+207+208)/3$

**FACTOR B06 - NEED FOR ENRICHMENT INDEX (JOB DESIRE):** Has to do with job related characteristics (autonomy, personal growth, use of skills, etc.) that the individual would like in a job.

**Variable Number Statement**

Variable Number	Statement
249	51 (In my job, I would like to have the characteristics described--from "not at all" to "in extreme large amount") Opportunities to have independence in my work.
250	52 A job that is meaningful.
251	53 The opportunity for personal growth in my job.
252	54 Opportunities in my work to use my skills.
253	55 Opportunities to perform a variety of tasks.

**FACTOR B07 - JOB MOTIVATION INDEX:** A composite index derived from the six job characteristics that reflect the overall "motivating potential" of a job; the degree to which a job will prompt high internal work motivation on the part of job incumbents.

**Index is computed using the following factors:**

800	Skill variety
801	Task identity
802	Task significance
805	Performance barriers/blockages
811	Task autonomy
804	Job feedback

Formula  $(1800+801+802+805+811+804)/4=813=804$

**FACTOR B08 - QWI TOTAL SCORE:** Assesses one's perception of motivation provided by his or her job. This factor is a variation of a scale employed by other job motivation theorists.

Score is computed using the variables in the following formula:

Formula  $(1201+1202+1203+1204+1205+1206+1207+1208+1209+1210+1211+1212+1213)/13$

**FACTOR 809 - JOB MOTIVATION INDEX ---- ADDITIVE:** This factor is a variation of a scale employed by other job motivation theorists.

Index is computed using the following factors:

Variable Number	Statement
800	Skills variety
801	Task identity
802	Task significance
805	Performance barriers/blockages
813	Task autonomy
804	Work repetition

Formula:  $(.800 + .801 + .802 + .805) / 4) + .813 + .804$

**FACTOR 810 - JOB PERFORMANCE GOALS:** Measures the extent to which job performance goals are clear, specific, realistic, understandable, and challenging.

Variable Number	Statement
217	To what extent do you know exactly what is expected of you in performing your job?
218	To what extent are your job performance goals difficult to accomplish?
219	To what extent are your job performance goals clear?
214	To what extent are your job performance goals specific?
221	To what extent are your job performance goals realistic?

**FACTOR 811 - PRIDE:** Measures the pride in one's work.

Variable Number	Statement
215	To what extent are you proud of your job?
275	To what extent does your work give you a feeling of pride?

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 11

**FACTOR 812 - TASK CHARACTERISTICS:** A combination of skill variety, task identity, task significance, and job feedback designed to measure several aspects of one's job.

Variable Number	Statement	Statement Number	Statement
201	To what extent does your job require you to do many different things, using a variety of your talents and skills?	17	To what extent does your job involve doing a single task or unit of work?
202	To what extent does your job involve doing a task that is significant, in that it affects others in some important way?	18	To what extent are you able to determine how well you are doing your job without feedback from anyone else?
203	To what extent is your job significant, in that it affects others in some important way?	19	To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work?
209	To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work?	26	To what extent does your job affect a lot of people?
210	To what extent does your job provide you with a chance to finish completely the piece of work you have begun?	27	To what extent does your job require you to use a number of complex skills?
211	To what extent does your job require you to use a number of complex skills?	28	To what extent does your job provide you with a chance to finish completely the piece of work you have begun?
212	To what extent does your job require you to use a number of complex skills?	29	To what extent does your job require you to use a number of complex skills?

**FACTOR 813 - TASK AUTONOMY:** Measures the degree to which the job provides freedom to do the work as one sees fit; discretion in scheduling, decision making, and means for accomplishing a job.

Variable Number	Statement	Statement Number	Statement
270	To what extent does your job provide a great deal of freedom and independence in scheduling your work?	20	To what extent does your job provide a great deal of freedom and independence in selecting your own procedures to accomplish its goals?
271	To what extent does your job provide a great deal of freedom and independence in selecting your own procedures to accomplish its goals?	21	To what extent does your job give you freedom to do your work as you see fit?
213	To what extent does your job give you freedom to do your work as you see fit?	30	To what extent are you allowed to make the decisions required to perform your job?
214	To what extent are you allowed to make the decisions required to perform your job?	31	To what extent are you allowed to make the decisions required to perform your job?

**FACTOR #16 - WORK REPETITION:** Measures the extent to which one performs the same tasks or faces the same type of problems in his or her job on a regular basis.

Variable Number	Statement
226	39 To what extent do you perform the same tasks repeatedly within a short period of time?
227	40 To what extent are you faced with the same type of problem on a weekly basis?

**FACTOR #15 (NOT USED)**

**FACTOR #16 - DESIRED REPETITIVE EASY TASKS:** Measures the extent to which one desires his or her job involve repetitive tasks or tasks that are easy to accomplish.

Variable Number	Statement
255	55 A job in which tasks are repetitive.
258	57 A job in which tasks are relatively easy to accomplish.

**FACTOR - JOB INFLUENCES (NOT A STATISTICAL FACTOR):**

Variable Number	Statement
216	33 To what extent do you feel accountable to your supervisor in accomplishing your job?
218	42 To what extent do co-workers in your work group maintain high standards of performance?

**FACTOR #17 - ADVANCEMENT/RECOGNITION:** Measures one's awareness of advancement and recognition, and feelings of being prepared (i.e., learning new skills for promotion).

Variable Number	Statement
234	41 In what extent are you aware of promotion/advancement opportunities that affect you?
239	42 To what extent do you have the opportunity to progress up your career ladder?

58

To what extent are you being prepared to accept increased responsibility?

To what extent do people who perform well receive recognition?

To what extent do you have the opportunity to learn skills which will improve your promotion potential?

210 44 To what extent are you being prepared to accept increased responsibility?

241 45 To what extent do people who perform well receive recognition?

276 47 To what extent do you have the opportunity to learn skills which will improve your promotion potential?

**FACTOR #18 - MANAGEMENT and SUPERVISION (A):** Measures the degree to which the worker has high performance standards and good work procedures. Measures support and guidance received, and the overall quality of supervision.

Variable Number	Statement
404	58 My supervisor is a good planner.
405	59 My supervisor sets high performance standards.
410	60 My supervisor encourages teamwork.
411	61 My supervisor represents the group at all times.
412	62 My supervisor establishes good work procedures.
413	63 My supervisor has made his responsibilities clear to the group.
445	64 My supervisor fully explains procedures to each group member.
416	65 My supervisor performs well under pressure.

**FACTOR - MANAGEMENT and SUPERVISION (B): (NOT A STATISTICAL FACTOR)**

Variable Number	Statement
424	66 My supervisor takes time to help me when needed.
434	71 My supervisor lets me know when I am doing a poor job.

When I need technical advice, I usually go to my supervisor.

14

13

**FACTOR 819 - SUPERVISORY COMMUNICATIONS CLIMATE:** Measures the degree to which the worker perceives that there is good rapport with supervisors; that there is a good working environment; that innovation for task improvement is encouraged; and that rewards are based upon performance.

Variable Number	Statement
426	67 My supervisor asks members for their ideas on task improvement.
428	68 My supervisor explains how my job contributes to the overall division.
431	69 My supervisor helps me set specific goals.
433	70 My supervisor lets me know when I am doing a good job.
435	72 My supervisor always helps me improve my performance.
436	73 My supervisor insures that I get job related training when needed.
437	74 My job performance has improved due to feedback received from my supervisor.
442	76 My supervisor frequently gives me feedback on how well I am doing my job.

The worker perceives that there is an open communications environment in the organization, and that adequate information is provided to accomplish the job.

Variable Number	Statement
300	82 Ideas developed by my work group are readily accepted by management personnel above my supervisor.
301	83 My organization provides all the necessary information for me to do my job effectively.
302	84 My organization provides adequate information to my work group.
303	85 My work group is usually aware of important events and situations.
304	86 My complaints are aired satisfactorily.
309	91 The information in my organization is widely shared so that those needing it have it available.

**FACTOR 819 - SUPERVISORY COMMUNICATIONS CLIMATE:** Measures the degree to which the worker perceives that there is good rapport with supervisors; that there is a good working environment; that innovation for task improvement is encouraged; and that rewards are based upon performance.

Variable Number	Statement
314	95 My organization has clear-cut goals.
317	99 The goals of my organization are reasonable.
318	100 My organization provides accurate information to my work group.

**FACTOR 821 - WORK GROUP EFFECTIVENESS:** Measures one's view of the quantity, quality, and efficiency of work generated by his or her work group.

Variable Number	Statement
259	77 The quantity of output of your work group is very high.
260	79 The quality of output of your work group is very high.

**FACTOR 821 - WORK GROUP EFFECTIVENESS:** Measures one's view of the quantity, quality, and efficiency of work generated by his or her work group.

Variable Number	Statement
261	79 When high priority work arises, such as short suspensions, crash programs, and schedule changes, the people in my work group do an outstanding job in handling these situations.

**FACTOR 821 - WORK GROUP EFFECTIVENESS:** Measures one's view of the quantity, quality, and efficiency of work generated by his or her work group.

Variable Number	Statement
264	80 Your work group always gets maximum output from available resources (e.g., personnel and materials).

**FACTOR 821 - WORK GROUP EFFECTIVENESS:** Measures one's view of the quantity, quality, and efficiency of work generated by his or her work group.

Variable Number	Statement
265	81 Your work group's performance in comparison to similar work groups is very high.

**FACTOR 820 - ORGANIZATIONAL COMMUNICATIONS CLIMATE:** Measures the degree to which the worker perceives that there is an open communications environment in the organization, and that adequate information is provided to accomplish the job.

Variable Number	Statement
277	49 To what extent do you have the necessary supplies to accomplish your job?
278	49 To what extent do details (not yet covered by primary or additional duty descriptions) interfere with the performance of your primary job?
279	50 To what extent does a bottleneck in your organization seriously affect the flow of work either to or from your group?

**FACTOR #22 - JOB RELATED SATISFACTION:** Measures the degree to which the worker generally satisfied with factors surrounding the job.

Variable Number	Statement Number	Statement
705	101	<u>Feeling of Helpfulness</u> The chance to help people and improve their welfare through the performance of my job. The importance of my job performance to the welfare of others.
709	102	<u>Co-worker Relationships</u> My amount of effort <u>concerned</u> to the effort of my co-workers, the extent to which my co-workers share the load, and the spirit of teamwork which exists among my co-workers.
710	103	<u>Family Attitude Toward Job</u> The recognition and the pride my family has in the work I do.
717	106	<u>Work Schedule</u> My work schedule; flexibility and regularity of my work schedule; the number of hours I work per week.
718	107	<u>Job Security</u>
719	108	<u>Acquired Valuable Skills</u> The chance to acquire valuable skills in my job which prepare me for future opportunities.
723	109	<u>My Job as a Whole</u>

**FACTOR #23 - JOB RELATED TRAINING:** Measures the extent to which one is satisfied with on-the-job and technical training received.

Variable Number	Statement Number	Statement
711	104	<u>On-the-Job Training (OJT)</u> The OJT instructional methods and instructors' competence.
712	105	<u>Technical Training (Other than OJT)</u> The technical training I have received to perform my current job.

**FACTOR #24 - GENERAL ORGANIZATIONAL CLIMATE:** Measures the individual's perception of his or her organizational environment as a whole (i.e., spirit of teamwork, communications, organizational pride, etc.).

Variable Number	Statement Number	Statement
305	305	My organization is very interested in the attitudes of the group members toward their jobs.
		My organization has a very strong interest in the welfare of its people.
		I am very proud to work for this organization.
		I feel responsible to my organization in accomplishing its mission.
		Personnel in my unit are recognized for outstanding performance.
		I am usually given the opportunity to show or demonstrate my work to others.
		There is a high spirit of teamwork among my co-workers.
		There is outstanding cooperation between work groups of my organization.
		I feel motivated to contribute my best efforts to the mission of my organization.
		My organization rewards individuals based on performance.

**FACTOR #25 - MOTIVATION POTENTIAL SCORE:** This factor is another variation of a Task Identity by other job motivation theorists. The score ranges between 1 and 33 with 100 being the Air Force average. Low scores indicate a poorly motivating job. Score is computed using the following factors:

Formula	(1800+801+802)/3 * 813/804
	16

**VARIABLES**

Variable Number	Factor Statement Number	Statement	Variable Number	Factor Statement Number	Statement
201 000/812	17	To what extent does your job require you to do many different things, using a variety of your talents and skills?	213	813	To what extent does your job give you freedom to do your work as you see fit?
202 801/812	18	To what extent does your job involve doing a <u>whole</u> task or unit of work?	214	813	To what extent are you allowed to make the major decisions required to perform your job well?
203 802/812	19	To what extent is your job significant, in that it affects others in some important way?	215	811	To what extent are you proud of your job?
204 & 205 --	--	(Not used)	216*	--	To what extent do you feel accountable to your supervisor in accomplishing your job?
206 805	23	To what extent do <u>additional duties</u> interfere with the <u>performance of your primary job</u> ?	217	810	To what extent do you know exactly what is expected of you in performing your job?
207 805	24	To what extent do you have adequate tools and equipment to accomplish your job?	218	810	To what extent are your job performance goals difficult to accomplish?
208 805	25	To what extent is the amount of work space provided adequate?	219 & 220	--	(Not used)
209 804/812	26	To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work?	221	810	To what extent are your job performance goals realistic?
210 802/812	27	To what extent does doing your job well affect a lot of people?	222-225	--	(Not used)
211 801/812	28	To what extent does your job provide you with a chance to finish completely the piece of work you have begun?	226	814	To what extent do you perform the same tasks repeatedly within a short period of time?
212 000/812	29	To what extent does your job require you to use a number of complex skills?	227	814	To what extent are you faced with the same type of problem on a weekly basis?

\* This variable is an element of "Job Influences" (not a statistical factor).

<u>Variable Number</u>	<u>Statement Factor Number</u>	<u>Statement</u>	<u>Variable Number</u>	<u>Statement Factor Number</u>	<u>Statement</u>
238-233	--	--  (Not used)	256 & 257	--	--  (Not used)
234	817	41  To what extent are you aware of promotion/advancement opportunities that affect you?	258	816	57  A job in which tasks are relatively easy to accomplish.
235-237	--	--  (Not used)	259	821	77  The quantity of output of your work group is very high.
238*	--	42  To what extent do co-workers in your work group maintain high standards of performance?	260	821	78  The quality of output of your work group is very high.
239	817	43  To what extent do you have the opportunity to progress up your career ladder?	261	821	79  When high priority work arises, such as short suspensions, crash programs, and schedule changes, the people in my work group do an outstanding job in handling these situations.
240	817	44  To what extent are you being prepared to accept increased responsibility?	262 & 263	--	--  (Not used)
241	817	45  To what extent do people who perform well receive recognition?	264	821	80  Your work group always gets maximum output from available resources (e.g., personnel and material).
242-248	--	--  (Not used)	265	821	81  Your work group's performance in comparison to similar work groups is very high.
249	806	51  Opportunities to have independence in my work?	266-269	--	--  (Not used)
250	806	52  A job that is meaningful.	270	813	80  To what extent does your job provide a great deal of freedom and independence in scheduling your work?
251	806	53  The opportunity for personal growth in my job.	271	813	81  To what extent does your job provide a great deal of freedom and independence in selecting your own procedures to accomplish it?
252	806	54  Opportunities in my work to use my skills.	272	804/812	82  To what extent are you able to determine how well you are doing your job without feedback from anyone else?
253	806	55  Opportunities to perform a variety of tasks.			
254	--	--  (Not used)			
255	816	56  A job in which tasks are repetitive.			

\* This variable is an element of "Job influences" (not a statistical factor).

<u>Variable Number</u>	<u>Factor Number</u>	<u>Statement Number</u>	<u>Statement</u>	<u>Variable Number</u>	<u>Factor Number</u>	<u>Statement Number</u>	<u>Statement</u>
273	810	36	To what extent are your job performance goals clear?	303	820	85	My work group is usually aware of important events and situations.
274	810	37	To what extent are your job performance goals specific?	304	820	86	My complaints are aired satisfactorily.
275	811	46	To what extent does your work give you a feeling of pride?	305	824	87	My organization is very interested in the attitudes of the group members toward their jobs.
276	817	47	To what extent do you have the opportunity to learn skills which will improve your promotion potential?	306	824	88	My organization has a very strong interest in the welfare of its people.
277**	-	49	To what extent do you have the necessary supplies to accomplish your job?	307	824	89	I am very proud to work for this organization.
278**	--	49	To what extent do details (task not covered by primary or additional duty descriptions) interfere with the performance of your primary job?	308	824	90	I feel responsible to my organization in accomplishing its mission.
279**	--	50	To what extent does a bottleneck in your organization seriously affect the flow of work either to or from your group?	309	820	91	The information in my organization is widely shared so that those needing it have it available.
280-299	--	--	(Not used)	310	824	92	Personnel in my unit are recognized for outstanding performance.
300	820	82	Ideas developed by my work group are readily accepted by management personnel above my supervisor.	311	824	93	I am usually given the opportunity to share or demonstrate my work to others.
301	820	83	My organization provides all the necessary information for me to do my job effectively.	312	824	94	There is a high spirit of teamwork among my co-workers.
302	820	84	My organization provides adequate information to my work group.	313	824	95	There is outstanding cooperation between work groups of my organization.

\*\* These variables are elements of "work interferences" (not a statistical factor).

Variable Number	Factor Number	Statement	Variable Number	Factor Number	Statement
310	820	96 My organization has clear-cut goals.	426	819	67 My supervisor gets members for their ideas on task improvements.
315	824	97 I feel motivated to contribute my best efforts to the mission of my organization.	427	--	(Not used)
316	824	98 My organization rewards individuals based on performance.	428	819	68 My supervisor explains how my job contributes to the overall mission.
317	820	99 The goals of my organization are reasonable.	429 & 430	--	(Not used)
318	820	100 My organization provides accurate information to my work group.	431	819	69 My supervisor helps me set specific goals.
319-403	--	-- (Not used)	432	--	(Not used)
404	818	58 My supervisor is a good planner.	433	819	70 My supervisor lets me know when I am doing a good job.
405	818	59 My supervisor sets high performance standards.	434***	--	71 My supervisor lets me know when I am doing a poor job.
406-409	--	-- (Not used)	435	819	72 My supervisor always helps me improve my performance.
410	818	60 My supervisor encourages teamwork.	436	819	73 My supervisor insures that I get job related training when needed.
411	818	61 My supervisor represents the group at all times.	437	819	74 My job performance has improved due to feedback received from my supervisor.
412	818	62 My supervisor establishes good work procedures.	438	--	(Not used)
413	818	63 My supervisor has made his responsibilities clear to the group.	439***	--	75 When I need technical advice, I usually go to my supervisor.
414 & 515	--	-- (Not used)	440 & 441	--	(Not used)
416	818	65 My supervisor performs well under pressure.	442	819	76 My supervisor frequently gives me feedback on how well I am doing my job.
417-423	--	-- (Not used)	443 & 444	--	(Not used)
424***	--	66 My supervisor takes time to help me when needed. (Not used)	445	818	64 My supervisor fully explains procedures to each group member.
425	--	-- (Not used)	446-704	--	(Not used)

see This variable is an element of "supervisory assistance" (not a statistical factor).

\*\*\* These variables are elements of "supervisory assistance" (not a statistical factor).

<u>Variable Number</u>	<u>Factor Number</u>	<u>Statement</u>
705	822	101 <b>Feeling of Helpfulness</b> The chance to help people and improve their welfare through the performance of my job. The importance of my job performance to the welfare of others.
706-708	--	-- (Not used)
709	822	102 <b>Co-worker Relationships</b> My amount of effort compared to the effort of my co-workers, the extent to which my co-workers share the load, and the spirit of teamwork which exists among my co-workers.
710	822	103 <b>Family Attitude Toward Job</b> The recognition and the pride my family has in the work I do.
711	823	104 <b>On-the-Job Training (OJT)</b> The OJT instructional methods and instructors' competence.
712	823	105 <b>Technical Training (other than OJT)</b> The technical training I have received to perform my current job.
713-716	--	-- (Not used)
717	822	106 <b>Work Schedule</b> My work schedule; flexibility and regularity of my work schedule; the number of hours I work per week.
718	822	107 <b>Job Security</b>
719	822	108 <b>Acquired Valuable Skills</b> The chance to acquire valuable skills in my job which prepare me for future opportunities.
720-722	--	-- (Not used)
723	822	109 <b>My Job as a Whole</b>
724-399	--	-- (Not used)

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## **APPENDIX**

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### **APPENDIX B**

#### **Analysis of Demographic Information**

Table B-1

	Ethnic Group			Data Base		
	65XX			Off(%)	Enl(%)	Civ(%)
n=	Off(%) 193	Enl(%) 242	Civ(%) 346	Off(%) 12,453	Enl(%) 69,805	Civ(%) 24,194
Amer. Indian	0.0	2.5	1.2	0.7	1.4	1.4
Asian	0.5	1.7	2.9	1.5	2.0	2.7
Black	8.3	20.9	15.0	5.8	16.3	9.5
Hispanic	0.5	4.5	4.6	2.4	5.2	16.2
White	88.1	66.9	73.4	87.6	71.6	67.3
Other	2.6	3.7	2.9	2.0	3.5	2.9
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Table B-2

	65XX			Data Base		
	Off(%)	Enl(%)	Civ(%)	Off(%)	Enl(%)	Civ(%)
n=	193	244	349	12,506	70,175	24,501
Not Married	15.5	34.4	30.1	21.3	35.5	18.4
Married	82.9	63.1	60.2	77.2	62.2	75.6
Single Parent	<u>1.6</u>	<u>2.5</u>	<u>9.7</u>	<u>1.5</u>	<u>2.3</u>	<u>6.0</u>
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Table B-3

Spouse Status: 65XX

<u>n</u> =	Geo. Separated			Not Geo. Separated		
	Off(%) 8	Enl(%) 12	Civ(%) 19	Off(%) 152	Enl(%) 142	Civ(%) 191
Civ. Employed	62.5	25.0	63.2	44.1	48.6	65.4
Not Employed	0.0	25.0	31.6	52.6	31.0	22.5
Mil. Member	37.5	50.0	5.2	3.3	20.4	12.1
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Table B-4

Spouse Status: Data Base

<u>n</u> =	Geo. Separated			Not Geo. Separated		
	Off(%) 418	Enl(%) 3,491	Civ(%) 1,054	Off(%) 9,233	Enl(%) 40,165	Civ(%) 17,468
Civ. Employed	58.9	58.7	69.3	34.1	37.9	54.2
Not Employed	20.3	26.4	17.4	57.2	48.0	34.3
Mil. Member	20.8	14.9	13.3	8.7	14.1	11.5
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Table B-5  
Educational Level

n=	65XX			Data Base		
	Off(%) <u>193</u>	Enl(%) <u>245</u>	Civ(%) <u>348</u>	Off(%) <u>12,483</u>	Enl(%) <u>70,041</u>	Civ(%) <u>24,242</u>
Non-H.S. Grad.	0.0	0.4	2.6	0.0	0.7	5.4
H.S. Grad. or GED	0.0	27.3	25.3	0.2	45.2	28.9
<2 yr. College	0.0	43.3	31.8	0.3	34.5	23.7
>2 yr. College	0.5	19.6	23.6	1.4	15.8	18.3
Bachelor's	33.2	7.8	14.1	53.3	3.2	15.4
Master's	64.2	1.2	2.6	36.7	0.5	7.2
P.H.D.	2.1	.4	0.0	8.1	0.1	1.1
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Table B-6  
Highest Level of Professional Military Education (PME)

	65XX			Data Base			
	n=	Off(%) <u>193</u>	Enl(%) <u>243</u>	Civ(%) <u>348</u>	Off(%) <u>12,500</u>	Enl(%) <u>70,138</u>	Civ(%) <u>24,442</u>
None		23.3	22.2	80.7	34.6	31.6	78.5
Phase 1 or 2		1.6	32.5	6.6	1.0	29.9	7.5
Phase 3		1.6	21.8	2.6	1.2	18.9	3.3
Phase 4		.5	12.8	3.4	.9	11.5	2.8
Sr. NCO Academy -			6.2	2.0	.2	4.9	2.0
SOS		23.8	.4	.3	26.8	.2	1.1
Int. Service School		31.1	4.1	2.6	23.2	2.9	3.4
Sr. Service School		18.1	-	1.7	12.2	.1	1.3
		<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Table B-7  
Number of People Directly Supervised

	65XX			Data Base		
	Off(%) <u>n=183</u>	Enl(%) <u>n=225</u>	Civ(%) <u>n=287</u>	Off(%) <u>n=11,774</u>	Enl(%) <u>n=63,784</u>	Civ(%) <u>n=20,225</u>
None	46.4	80.0	93.6	41.3	60.2	69.5
1	2.2	1.8	1.0	7.3	7.6	2.9
2	2.7	2.2	1.0	6.4	7.2	2.6
3	8.2	2.7	.3	8.0	5.5	2.8
4 to 5	14.2	5.8	2.1	13.7	7.9	5.4
6 to 8	14.8	3.1	1.0	10.0	4.8	4.6
9+	11.5	4.4	1.0	13.3	6.8	12.2
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Table B-8  
Number of People for Whom Respondent Writes OER/APR/Appraisal

	65XX			Data Base		
	Off(%) <u>n=193</u>	Enl(%) <u>n=245</u>	Civ(%) <u>n=349</u>	Off(%) <u>n=12,480</u>	Enl(%) <u>n=70,068</u>	Civ(%) <u>n=24,501</u>
None	49.8	84.1	95.6	51.5	66.6	78.6
1	4.1	2.0	0.9	9.3	8.6	2.1
2	3.6	2.4	0.6	7.1	7.8	1.9
3	8.3	1.6	0.0	7.1	5.7	2.1
4 to 5	14.0	2.9	0.9	11.3	7.0	3.9
6 to 8	10.9	3.3	0.9	8.4	2.4	3.2
9+	9.3	3.7	1.1	5.3	1.9	8.3
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Table B-9  
Supervisor Writes Respondent's OER/APR/Appraisal

	65XX			Data Base		
	Off(%) <u>n=193</u>	Enl(%) <u>n=237</u>	Civ(%) <u>n=341</u>	Off(%) <u>n=12,328</u>	Enl(%) <u>n=69,276</u>	Civ(%) <u>n=23,720</u>
Yes	37.0	82.7	84.5	77.8	70.3	77.7
No	33.7	5.9	5.3	14.0	18.7	9.6
Not Sure	<u>9.3</u>	<u>11.4</u>	<u>10.2</u>	<u>8.2</u>	<u>11.0</u>	<u>12.7</u>
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Table B-10  
Work Schedule

n=	65XX			Data Base		
	Off(%) <u>193</u>	Enl(%) <u>242</u>	Civ(%) <u>344</u>	Off(%) <u>12,388</u>	Enl(%) <u>69,604</u>	Civ(%) <u>24,021</u>
Day Shift	91.2	95.1	96.2	58.8	60.0	87.9
Swing Shift	0.5	0.8	0.9	0.2	7.4	3.2
Mid. Shift	0.0	0.0	0.3	0.1	3.0	0.7
Rotating	0.0	0.8	2.0	4.8	13.5	4.6
Irregular	3.1	2.9	0.0	12.6	12.3	2.3
Freq. TDY/Crew	<u>5.2</u>	<u>0.4</u>	<u>0.6</u>	<u>23.5</u>	<u>3.8</u>	<u>1.3</u>
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Table B-11  
Supervisor Holds Group Meetings

	65XX			Data Base		
	Off (%) <u>n=190</u>	Enl(%) <u>n=244</u>	Civ(%) <u>n=345</u>	Off(%) <u>n=12,367</u>	Enl(%) <u>n=69,158</u>	Civ(%) <u>n=24,181</u>
Never	4.7	7.0	6.7	6.6	16.5	10.1
Occasionally	24.7	24.6	40.5	22.9	33.8	34.5
Monthly	5.8	8.2	14.8	14.0	8.7	18.6
Weekly	52.7	55.3	32.8	42.3	27.3	30.5
Daily	8.4	2.9	2.9	12.2	11.5	4.5
Continuously	3.7	2.0	2.3	2.0	2.2	1.8
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Table B-12  
Supervisor Holds Group Meetings to Solve Problems

	65XX			Data Base		
	Off(%) <u>n=189</u>	Enl(%) <u>n=243</u>	Civ(%) <u>n=341</u>	Off(%) <u>n=12,293</u>	Enl(%) <u>n=68,717</u>	Civ(%) <u>n=23,845</u>
Never	22.8	20.2	22.0	15.3	25.0	24.2
Occasionally	45.5	45.7	49.0	42.5	39.8	44.7
Half the time	15.3	19.3	15.8	22.0	16.7	15.4
Always	<u>16.4</u>	<u>14.8</u>	<u>13.2</u>	<u>20.2</u>	<u>18.5</u>	<u>15.7</u>
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Table B-13  
Aeronautical Rating and Current Status

	<u>65XX</u>		<u>Data Base</u>		
	<u>n=</u>	<u>Off(%)</u> <u>193</u>	<u>Enl(%)</u> <u>240</u>	<u>Off(%)</u> <u>12,346</u>	<u>Enl(%)</u> <u>69,015</u>
Non-rated, not on Aircrew		87.6	98.8	60.9	90.6
Non-rated, on Aircrew		1.6	0.0	2.4	2.1
Rated, in crew/ops job		0.5	0.0	27.4	1.6
Rated, in support job		<u>10.3</u>	<u>1.2</u>	<u>9.3</u>	<u>5.7</u>
		<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Table B-14  
Career Intent

	<u>65XX</u>			<u>Data Base</u>		
	<u>n=</u>	<u>Off(%)</u> <u>191</u>	<u>Enl(%)</u> <u>244</u>	<u>Civ(%)</u> <u>304</u>	<u>Off(%)</u> <u>12,447</u>	<u>Enl(%)</u> <u>69,903</u>
Retire in 12 mos.	3.7	4.1	2.6	3.4	3.1	6.3
Career	63.3	38.1	57.2	50.8	34.9	51.4
Likely career	21.5	16.8	26.1	22.5	18.8	23.3
Maybe	8.4	22.1	9.9	15.2	20.6	12.7
Prob. not career	3.1	12.3	1.6	5.1	13.6	3.5
Separate	<u>0.0</u>	<u>6.6</u>	<u>2.6</u>	<u>3.0</u>	<u>9.0</u>	<u>2.8</u>
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Table B-15  
65XX Respondents by Command

<u>Command</u>	<u>No. of Respondents</u>	<u>Percent</u>
AFSC	295	37.6
AFLC	102	13.0
ATC	42	5.4
SAC	128	16.3
TAC	92	11.7
USAFE	44	5.6
MAC	33	4.2
PACAF	7	.9
ANG	10	1.3
Other	<u>32</u>	<u>4.1</u>
Total	785	100.0

Table B-16  
65XX Civilian Personnel by Grade

<u>Grade (GS)</u>	<u>No. of Respondents</u>
3	10
4	21
5	68
6	26
7	45
8	2
9	85
11	37
12	21
13	<u>3</u>
Total	318

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## APPENDIX

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### APPENDIX C

Comparison of

Contracting and Manufacturing (65XX) Personnel Attitudes  
to Those of the LMDC Data Base

Table C-1  
t-test: 65XX Officers vs. Other Officers

		<u>The Work Itself</u>		
		<u>Mean</u>	<u>SD</u>	<u>df</u>
<u>Job Performance Goals</u>				
65XX Officers		4.548	0.986	
Other Officers		4.722	0.983	12,208
<u>Task Characteristics</u>				
65XX Officers		5.152	0.906	
Other Officers		5.344	0.951	12,280
<u>Task Autonomy</u>				
65XX Officers		4.585	1.266	
Other Officers		4.557	1.354	12,309
<u>Work Repetition</u>				
65XX Officers		3.872	1.303	
Other Officers		4.319	1.372	12,503
<u>Desired Repetitive/ Easy Tasks</u>				
65XX Officers		2.314	0.881	
Other Officers		2.476	1.051	190
<u>Job Related Training</u>				
65XX Officers		4.338	1.461	
Other Officers		4.691	1.476	9,931
				3.09**

\* p < .05.

\*\* p < .01.

\*\*\* p < .001.

Table C-1 (Continued)

	Job Enrichment			
	Mean	SD	df	t
<u>Skill Variety</u>				
65XX Officers	5.343	1.147	197	1.13
Other Officers	5.438	1.282		
<u>Task Identity</u>				
65XX Officers	5.008	1.231	12,551	2.44*
Other Officers	5.224	1.212		
<u>Task Significance</u>				
65XX Officers	5.627	1.257	12,605	1.86
Other Officers	5.796	1.253		
<u>Job Feedback</u>				
65XX Officers	4.631	1.195	12,570	3.02**
Other Officers	4.891	1.180		
<u>Need For Enrichment</u>				
65XX Officers	6.092	.897	12,292	0.04
Other Officers	6.089	.864		
<u>Job Motivation Index</u>				
65XX Officers	119.645	64.982	11,490	1.32
Other Officers	126.389	67.281		

\* p&lt;.05.

\*\* p&lt;.01.

\*\*\* p&lt;.001.

Table C-1 (Continued)

	<u>Work Group Process</u>			
	<u>Mean</u>	<u>SD</u>	<u>df</u>	<u>t</u>
<u>Work Support</u>				
65XX Officers	4.775	0.920		
Other Officers	4.550	1.090	191	3.28**
<u>Management/Supervision</u>				
65XX Officers	5.246	1.384		
Other Officers	5.311	1.342	11,862	0.65
<u>Supervisory Communications Climate</u>				
65XX Officers	4.739	1.496		
Other Officers	4.860	1.418	11,606	1.11
<u>Organizational Communications Climate</u>				
65XX Officers	4.862	1.279		
Other Officers	4.887	1.259	11,719	0.26

\*  $p < .05$ .\*\*  $p < .01$ .\*\*\*  $p < .001$ .

Table C-1 (Continued)

	<u>Work Group Output</u>			
	<u>Mean</u>	<u>SD</u>	<u>df</u>	<u>t</u>
<u>Pride</u>				
65XX Officers	5.296	1.420		
Other Officers	5.479	1.392	12,539	1.80
<u>Advancement/Recognition</u>				
65XX Officers	4.850	1.208		
Other Officers	4.572	1.187	12,036	3.15**
<u>Perceived Productivity</u>				
65XX Officers	5.687	1.133		
Other Officers	5.774	1.078	12,162	1.09
<u>Job Related Satisfaction</u>				
65XX Officers	5.531	1.027		
Other Officers	5.359	1.092	11,341	2.05*
<u>General Organizational Climate</u>				
65XX Officers	5.090	1.324		
Other Officers	5.205	1.250	11,787	1.22

\* p&lt;.05.

\*\* p&lt;.01.

\*\*\* p&lt;.001.

Table C-2

## Selected Variable Comparisons--Officers

<u>Factor:</u>	<u>Work Support</u>	<u>Mean</u>	<u>SD</u>	<u>df</u>	<u>t</u>
<u>Variable 206</u>					
	65XX Officers	3.483	1.673		
	Other Officers	3.781	1.785	12,357	2.22*
<u>Variable 207</u>					
	65XX Officers	5.022	1.171		
	Other Officers	4.883	1.314	184	1.58
<u>Variable 208</u>					
	65XX Officers	4.792	1.749		
	Other Officers	4.551	1.689	12,460	1.89
<u>Factor: Advancement/Recognition</u>					
<u>Variable 719</u>					
	65XX Officers	5.819	1.547		
	Other Officers	5.179	1.736	187	5.53***

\* p&lt;.05.

\*\* p&lt;.01.

\*\*\* p&lt;.001.

Table C-3  
t-test: 65XX Enlisted vs. Other Enlisted

	<u>The Work Itself</u>			
	<u>Mean</u>	<u>SD</u>	<u>df</u>	<u>t</u>
<b><u>Job Performance Goals</u></b>				
65XX Enlisted	4.718	0.983	67,874	0.30
Other Enlisted	4.737	0.979		
<b><u>Task Characteristics</u></b>				
65XX Enlisted	5.331	0.893		
Other Enlisted	5.036	1.003	237	5.06***
<b><u>Task Autonomy</u></b>				
65XX Enlisted	4.190	1.300		
Other Enlisted	3.834	1.421	67,395	3.84***
<b><u>Work Repetition</u></b>				
65XX Enlisted	5.066	1.381		
Other Enlisted	5.135	1.371	69,361	0.78
<b><u>Desired Repetitive/ Easy Tasks</u></b>				
65XX Enlisted	2.856	1.235		
Other Enlisted	3.221	1.418	240	4.57***
<b><u>Job Related Training</u></b>				
65XX Enlisted	4.449	1.569		
Other Enlisted	4.476	1.577	66,372	0.26

\* p<.05.  
 \*\* p<.01.  
 \*\*\* p<.001.

Table C-3 (Continued)

	Job Enrichment			
	<u>Mean</u>	<u>SD</u>	<u>df</u>	<u>t</u>
<u>Skill Variety</u>				
65XX Enlisted	4.961	1.320		
Other Enlisted	4.596	1.457	244	4.30***
<u>Task Identity</u>				
65XX Enlisted	5.386	1.191		
Other Enlisted	5.051	1.249	69,404	4.17***
<u>Task Significance</u>				
65XX Enlisted	5.947	1.056		
Other Enlisted	5.698	1.310	244	3.66***
<u>Job Feedback</u>				
65XX Enlisted	4.957	1.238		
Other Enlisted	4.758	1.292	69,610	2.39*
<u>Need for Enrichment</u>				
65XX Enlisted	5.900	1.047		
Other Enlisted	5.472	1.240	243	6.34***
<u>Job Motivation Index</u>				
65XX Enlisted	118.170	63.356		
Other Enlisted	100.392	62.916	62,705	4.21***

\*  $p < .05$ .  
 \*\*  $p < .01$ .  
 \*\*\*  $p < .001$ .

Table C-3 (Continued)

	<u>Work Group Process</u>			
	<u>Mean</u>	<u>SD</u>	<u>df</u>	<u>t</u>
<u>Work Support</u>				
65XX Enlisted	4.485	1.097	67,816	0.66
Other Enlisted	4.532	1.118		
<u>Management/Supervision</u>				
65XX Enlisted	4.902	1.645	65,803	0.06
Other Enlisted	4.895	1.575		
<u>Supervisory Communications Climate</u>				
65XX Enlisted	4.578	1.727	66,055	0.59
Other Enlisted	4.514	1.635		
<u>Organizational Communications Climate</u>				
65XX Enlisted	4.619	1.338	64,623	2.80**
Other Enlisted	4.375	1.317		

\* p&lt;.05.

\*\* p&lt;.01.

\*\*\* p&lt;.001.

Table C-3 (Continued)

	<u>Work Group Output</u>			
	<u>Mean</u>	<u>SD</u>	<u>df</u>	<u>t</u>
<u>Pride</u>				
65XX Enlisted	5.305	1.533	69,168	3.82***
Other Enlisted	4.901	1.645		
<u>Advancement/Recognition</u>				
65XX Enlisted	4.589	1.222	66,891	4.16***
Other Enlisted	4.263	1.197		
<u>Perceived Productivity</u>				
65XX Enlisted	5.707	1.203	66,989	3.05**
Other Enlisted	5.463	1.242		
<u>Job Related Satisfaction</u>				
65XX Enlisted	5.491	0.994	213	7.84***
Other Enlisted	4.954	1.219		
<u>Gen. Organizational Climate</u>				
65XX Enlisted	4.636	1.434	64,561	2.55*
Other Enlisted	4.402	1.399		

\* p<.05.  
 \*\* p<.01.  
 \*\*\* p<.001.

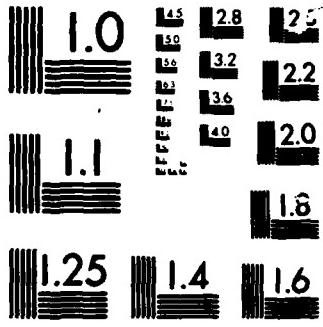
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Table C-4

t-test: 65XX Enlisted Stateside vs. 65XX Enlisted Overseas

	<u>Work Itself</u>			
	<u>Mean</u>	<u>SD</u>	<u>df</u>	<u>t</u>
<u>Job Performance Goals</u>				
65XX Enl. Stateside	4.69	.99		
65XX Enl. Overseas	4.77	.96	234	0.56
<u>Task Characteristics</u>				
65XX Enl. Stateside	5.34	.89		
65XX Enl. Overseas	5.32	.92	234	0.14
<u>Task Autonomy</u>				
65XX Enl. Stateside	4.16	1.29		
65XX Enl. Overseas	4.26	1.34	234	0.52
<u>Work Repetition</u>				
65XX Enl. Stateside	5.08	1.39		
65XX Enl. Overseas	5.04	1.36	241	0.19
<u>Desired Repetitive/ Easy Tasks</u>				
65XX Enl. Stateside	2.89	1.25		
65XX Enl. Overseas	2.77	1.20	237	0.72
<u>Job Related Training</u>				
65XX Enl. Stateside	4.40	1.57		
65XX Enl. Overseas	4.55	1.58	223	0.65

\* p&lt;.05.

\*\* p&lt;.01.

\*\*\* p&lt;.001.

Table C-4 (Continued)

	Job Enrichment			
	<u>Mean</u>	<u>SD</u>	<u>df</u>	<u>t</u>
<u>Skill Variety</u>				
65XX Enl. Stateside	5.02	1.30		
65XX Enl. Overseas	4.82	1.38	241	1.08
<u>Task Identity</u>				
65XX Enl. Stateside	5.36	1.18		
65XX Enl. Overseas	5.46	1.21	240	0.62
<u>Job Feedback</u>				
65XX Enl. Stateside	4.93	1.28		
65XX Enl. Overseas	5.01	1.13	240	0.47
<u>Job Motivation Index</u>				
65XX Enl. Stateside	116.99	62.29		
65XX Enl. Overseas	120.97	66.23	221	0.43

\*  $p < .05$ .\*\*  $p < .01$ .\*\*\*  $p < .001$ .

Table C-4 (Continued)

	<u>Work Group Process</u>			
	<u>Mean</u>	<u>SD</u>	<u>df</u>	<u>t</u>
<u>Work Support</u>				
65XX Enl. Stateside	4.46	1.02		
65XX Enl. Overseas	4.53	1.26	112	0.41
<u>Management/Supervision</u>				
65XX Enl. Stateside	4.98	1.67		
65XX Enl. Overseas	4.73	1.59	230	1.10
<u>Supervisory Comm. Climate</u>				
65XX Enl. Stateside	4.63	1.74		
65XX Enl. Overseas	4.45	1.71	226	0.70
<u>Org. Comm. Climate</u>				
65XX Enl. Stateside	4.56	1.34		
65XX Enl. Overseas	4.77	1.34	227	1.10

\* p<.05.  
 \*\* p<.01.  
 \*\*\* p<.001.

Table C-4 (Continued)

	<u>Work Group Output</u>			
	<u>Mean</u>	<u>SD</u>	<u>df</u>	<u>t</u>
<u>Pride</u>				
65XX Enl. Stateside	5.32	1.55	241	0.29
65XX Enl. Overseas	5.26	1.50		
<u>Advancement/Recognition</u>				
65XX Enl. Stateside	4.57	1.24	232	0.28
65XX Enl. Overseas	4.62	1.20		
<u>Work Group Effectiveness</u>				
65XX Enl. Stateside	5.79	1.04	100	1.45
65XX Enl. Overseas	5.51	1.51		
<u>Job Satisfaction</u>				
65XX Enl. Stateside	5.46	1.01	210	0.61
65XX Enl. Overseas	5.56	.96		
<u>Gen. Org. Climate</u>				
65XX Enl. Stateside	4.62	1.40	230	0.32
65XX Enl. Overseas	4.68	1.52		

\* p&lt;.05.

\*\* p&lt;.01.

\*\*\* p&lt;.001.

Table C-5  
t-test: 65XX Civilians vs. Other Civilians

	<u>The Work Itself</u>			
	<u>Mean</u>	<u>SD</u>	<u>df</u>	<u>t</u>
<u>Job Performance Goals</u>				
65XX Civilians	4.802	0.958		
Other Civilians	4.852	0.999	23,716	0.92
<u>Task Characteristics</u>				
65XX Civilians	5.235	0.984		
Other Civilians	5.309	0.951	23,435	1.41
<u>Task Autonomy</u>				
65XX Civilians	4.405	1.304		
Other Civilians	4.586	1.351	23,908	2.45*
<u>Work Repetition</u>				
65XX Civilians	4.796	1.308		
Other Civilians	4.644	1.435	355	2.14*
<u>Desired Repetitive/ Easy Tasks</u>				
65XX Civilians	2.945	1.365		
Other Civilians	3.090	1.396	23,870	1.89
<u>Job Related Training</u>				
65XX Civilians	4.332	1.712		
Other Civilians	4.476	1.672	22,173	1.56

\* p<.05.  
 \*\* p<.01.  
 \*\*\* p<.001.

Table C-5 (Continued)

	Job Enrichment			
	<u>Mean</u>	<u>SD</u>	<u>df</u>	<u>t</u>
<u>Skill Variety</u>				
65XX Civilians	4.965	1.349		
Other Civilians	5.078	1.367	24,379	1.53
<u>Task Identity</u>				
65XX Civilians	5.446	1.192		
Other Civilians	5.331	1.170	24,433	1.82
<u>Task Significance</u>				
65XX Civilians	5.661	1.238		
Other Civilians	5.712	1.256	24,491	0.75
<u>Job Feedback</u>				
65XX Civilians	4.858	1.284		
Other Civilians	5.056	1.269	24,488	2.89**
<u>Need for Enrichment</u>				
65XX Civilians	5.864	1.046		
Other Civilians	5.695	1.183	348	2.93**
<u>Job Motivation Index</u>				
65XX Civilians	122.445	69.014		
Other Civilians	131.293	70.322	21,899	2.23*

\* p&lt;.05.

\*\* p&lt;.01.

\*\*\* p&lt;.001.

Table C-5 (Continued)

	Work Group Process			
	<u>Mean</u>	<u>SD</u>	<u>df</u>	<u>t</u>
<u>Work Support</u>				
65XX Civilians	4.791	1.046		
Other Civilians	4.666	1.110	23,683	2.06*
<u>Management/Supervision</u>				
65XX Civilians	4.892	1.597		
Other Civilians	4.980	1.637	23,049	0.97
<u>Supervisory Communications Climate</u>				
65XX Civilians	4.537	1.702		
Other Civilians	4.572	1.704	22,956	0.37
<u>Organization Communications Climate</u>				
65XX Civilians	4.657	1.315		
Other Civilians	4.610	1.409	22,577	0.60

\* p&lt;.05.

\*\* p&lt;.01.

\*\*\* p&lt;.001.

Table C-5 (Continued)

	<u>Work Group Output</u>			
	<u>Mean</u>	<u>SD</u>	<u>df</u>	<u>t</u>
<u>Pride</u>				
65XX Civilians	5.382	1.432	24,417	0.46
Other Civilians	5.418	1.448		
<u>Advancement/Recognition</u>				
65XX Civilians	4.024	1.289	22,742	3.21**
Other Civilians	3.787	1.343		
<u>Perceived Productivity</u>				
65XX Civilians	5.549	1.193	23,578	1.27
Other Civilians	5.637	1.252		
<u>Job Related Satisfaction</u>				
65XX Civilians	5.544	0.990	328	2.26*
Other Civilians	5.418	1.086		
<u>Gen. Organizational Climate</u>				
65XX Civilians	4.775	1.350	22,502	0.08
Other Civilians	4.781	1.395		

\* p&lt;.05.

\*\* p&lt;.01.

\*\*\* p&lt;.001.

Table C-6  
65XX Civilian Employees by Grade (ANOVA)

	<u>Mean</u>	<u>SD</u>	<u>Subset</u>	<u>df</u>	<u>F</u>
<b>Task Autonomy (813)</b>				<b>9,299</b>	<b>2.52**</b>
GS-3	3.78	.81	1		
GS-4	4.09	1.40	1		
GS-5	4.05	1.41	1		
GS-6	4.91	1.20	1		
GS-7	4.35	1.47	1		
GS-8	4.63	.88	1		
GS-9	4.32	1.24	1		
GS-11	4.74	1.07	1		
GS-12	5.15	1.28	1		
GS-13	4.75	1.09	1		
<b>Work Repetition (814)</b>				<b>9,304</b>	<b>3.67***</b>
GS-3	4.45	.96	1		
GS-4	5.52	1.39	1		
GS-5	5.05	1.34	1		
GS-6	5.23	.91	1		
GS-7	4.83	1.26	1		
GS-8	5.25	.35	1		
GS-9	4.61	1.19	1		
GS-11	4.12	1.22	1		
GS-12	4.19	1.35	1		
GS-13	4.17	.76	1		
<b>Job Feedback (804)</b>				<b>9,308</b>	<b>1.85</b>
GS-3	4.60	1.51	1		
GS-4	4.95	1.32	1		
GS-5	4.44	1.42	1		
GS-6	5.11	1.28	1		
GS-7	5.08	1.37	1		
GS-8	5.00	.71	1		
GS-9	4.69	1.23	1		
GS-11	5.06	1.07	1		
GS-12	5.36	1.18	1		
GS-13	5.67	.29	1		

\* p<.05.  
\*\* p<.01.  
\*\*\* p<.001.

Table C-6 (Continued)

	<u>Mean</u>	<u>SD</u>	<u>Subset</u>	<u>df</u>	<u>F</u>
Need for Enrichment (806)				9,299	1.62
GS-3	5.08	1.38	1		
GS-4	5.99	1.09	1		
GS-5	5.63	1.33	1		
GS-6	5.85	.94	1		
GS-7	6.06	.91	1		
GS-8	5.90	.14	1		
GS-9	5.81	.92	1		
GS-11	6.07	.73	1		
GS-12	6.10	1.05	1		
GS-13	6.47	.61	1		
Job Motivation (807)				9,279	3.53***
GS-3	90.66	40.15	1		
GS-4	95.33	59.55	1		
GS-5	96.52	61.36	1		
GS-6	148.32	74.96	1		
GS-7	127.65	79.06	1		
GS-8	127.36	6.41	1		
GS-9	115.46	62.59	1		
GS-11	142.85	67.83	1		
GS-12	167.10	74.53	1		
GS-13	145.69	53.09	1		
Job Satisfaction (822)				9,279	3.76***
GS-3	5.30	.86	1		
GS-4	5.31	.99	1		
GS-5	4.98	1.08	1		
GS-6	5.87	.96	1		
GS-7	5.80	.83	1		
GS-8	6.15	.40	1		
GS-9	5.64	.97	1		
GS-11	5.80	.95	1		
GS-12	5.80	.77	1		
GS-13	5.71	1.76	1		

\*  $p < .05$ .\*\*  $p < .01$ .\*\*\*  $p < .001$ .

END  
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